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MANAGEMENT OF ARCHEOLOGICAL AND PALEONTOLOGICAL RESOURCES ON FEDERAL LANDS

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HEARING

BEFORE THE

SUBCOMMITTEE ON PUBLIC LANDS, RESERVED
WATER AND RESOURCE CONSERVATION

OF THE

COMMITTEE ON
ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

NINETY-NINTH CONGRESS

FIRST SESSION

ON

HOW EFFECTIVELY THE LAND MANAGING AGENCIES ARE CARRYING OUT THEIR RESPONSIBILITIES TO MANAGE, PROTECT, AND PRESERVE ARCHEOLOGICAL AND PALEONTOLOGICAL SITES AND OBJECTS

ALBUQUERQUE, NM, OCTOBER 14, 1985

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Committee on Energy and Natural Resources

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MANAGEMENT OF ARCHEOLOGICAL AND PALEONTOLOGICAL RESOURCES ON FEDERAL LANDS

MONDAY. OCTOBER 14, 1985

U.S. SENATE, SUBCOMMITTEE ON PUBLIC LANDS, RESERVED WATER AND RESOURCE CONSERVATION, COMMITTEE ON ENERGY AND NATURAL RESOURCES,

Albuquerque, NM.

The subcommittee met, pursuant to notice, at 9 a.m., 717 University Boulevard, Northeast, Albuquerque, NM, Hon. Pete V. Domenici, presiding.

Present: Senators Domenici and Bingaman.

Also present: Tony Bevinetto, professional staff member; and Thomas B. Williams, professional staff member for the minority.

OPENING STATEMENT OF HON. PETE V. DOMENICI, A U.S. SENATOR FROM THE STATE OF NEW MEXICO

Senator DOMENICI. First I wanted to thank Senator Bingaman for suggesting that we have this hearing. As a result of that suggestion, the official chairman of the subcommittee, Senator Malcolm Wallop from Wyoming contacted me and asked if I would join in this hearing and preside, and I was delighted to do that. I hope everyone understands that we have a very lengthy set of hearings here, with a very great number of witnesses, and in my opening remarks I am going to suggest some rules for all of us so that we get through this and have adequate time to hear from everyone. So if you listen to those carefully, I would greatly appreciate it.

Let me just start by saying good morning to everyone. Thank you for coming here on this beautiful day. I am pleased to be chairing this hearing on problems connected with the protection, access, curation, enforcement and management of archeological and paleontological resources in our State. I have been involved in this for quite some time. Seven years ago, in the Ninety-sixth Congress, we found that the existing Federal laws did not provide adequate protection to prevent loss and destruction of archeological resources and sites.

We held hearings and found that at that time, professional looters had been active in the Southwest and elsewhere in pirating our archeological sites on public lands. We were most grateful that the then chairman of the committee, the deceased Senator Jackson, encouraged our efforts and we found that virtually tens of thousands of dollars worth of artifacts had been taken from public lands in New Mexico, and Mimbres pots were being illegally dug out and sold in an international art market. We found that prosecutors were almost powerless, as some of you remember, to protect these natural resources.

As a result, in 1979, a number of us got together and sponsored a bill that ultimately became known as the Archeological Resource Protection Act. The purpose of this law was to secure the protection of the archeological resources and sites which are on public lands and Indian land. This law put regulations into effect on excavations and removal of these resources, and provided Federal land managers with the authority to assess civil penalties for violations. This law directed the Secretaries of the Interior, Agriculture and Defense to set forth rules and regulations which foster increased cooperation and exchange of information between governmental authorities, professionals, and private individuals.

During this same period, we in the Congress discovered there was an increased general interest in archeological resources in the Chaco Canyon area. This interest came at a time when there was extensive exploration and development for a wide variety of energy resources including coal, uranium, oil and natural gas in the same area.

We were faced with a very difficult challenge in how to simultaneously develop important energy resources, uphold, valid and existing rights of existing private property owners and preserve the archeological integrity of the area. At that time, we held a number of meetings and hearings to see if we could find a solution to what appeared to be genuine conflicting purposes that might result in solving none of the problems. Ultimately another law was passed, Public Law 96-550, which included as one of its titles the Chaco Culture National Historical Park.

The purpose of the Chaco Culture Law was threefold. First, it recognized the unique archeological resources in the Chaco Canyon. Second, it provided for the preservation of these resources, and thirdly, this law encouraged cooperation between the Federal agencies, private corporations and other interested individuals so that development which was compatible with the preservation could be obtained.

As I indicated a few moments ago, this is an oversight hearing to investigate whether these laws are doing their intended job. Clearly, any law that protects archeological and paleontological sites should be periodically reviewed to determine if it's working as intended, and if not, what changes should be made. As I indicated, that's the purpose of this hearing and again, I thank Senator Bingaman for recommending that we do it at this time.

Today, we will receive testimony from many different witnesses. We will have the opportunity to hear from expert archeologists, paleontologists, and many curators, law enforcement officials, and yes, the Federal land managers and other land managers. These witnesses will identify the problems connected with the protection, access, curation, enforcement, and management of these sites and hopefully, some solutions will be suggested. We will listen to the testimony and ask questions about these subjects, and as I indicated, the testimony will be official and we will then proceed in a normal legislative manner in Washington to use the hearing matter as obtained.

You know that there's a list of posted witnesses. You are aware of them. If you need a copy of that, that's there in the hallway and we would be glad to furnish it to you. Out of fairness to all of those who wish to testify, I will ask witnesses to limit their oral testimony to 3 minutes. Your entire written testimony will be included in the hearing record. Witnesses have been placed in panels. So hold on to your own testimony until your panel is called to the witness table. These lights we have up here, I don't use them very often, but in light of the number of witnesses we have, we will start out with them and see if they work. They are like traffic signals. A green is you are on your way, go, and yellow says you have got 1 minute left and the red means your time is up. Nothing will happen if you keep talking unless we are really running behind and then you can't tell what might happen.

If you wish to receive a printed copy of the hearing record, put your name and mailing address on the labels in the lobby. A copy will be mailed to you when printed. The record will remain open for 2 weeks. If any of you want to provide additional information or a statement, send one copy to my office or Senator Bingaman's office here in Albuquerque or in Washington. Again, I wish to thank all of you as individual witnesses and the organizations that you represent, for coming out on a holiday to help us review these laws. Now, I yield to Senator Bingaman and then take the second panel. So the second panel will be ready to be first.

[The prepared statement of Senator Domenici follows:]

STATEMENT OF SENATOR PETE V. DOMENICI
SUBCOMMITTEE ON PUBLIC LANDS, RESERVED WATER AND RESOURCE CONSERVATION

October 14, 1985

Good morning. Thank you for coming here on this Columbus Day holiday. I will keep my opening remarks short because we have many people to hear from in a short period of time. I am pleased to be chairing a hearing on the problems connected with the protection, access, curation, enforcement and management of archaeological and paleontological resources in our State. This has been an ongoing concern of mine.

Seven years ago, during the 96th Congress we found that existing Federal laws did not provide adequate protection to prevent the loss and destruction of archaeological resources and sites. We held hearings and found that professional looters had been active in the southwest and elsewhere in pirating archaeological sites on public lands. We found that virtually tens of thousands of dollars worth of artifacts had been taken from public lands in New Mexico. Mimbres pots were being illegally dug out and sold in the international art market. We also found that prosecutors were almost powerless to protect these natural resources.

As a result, in 1979, I sponsored a bill that ultimately became the "Archaeological Resource Protection Act". The purpose of this law was to secure the protection of archaeological resources and sites which are on public lands and Indian lands. This law put into place regulations on excavation and removal of

ARCHAEOLOGICAL RESOURCES. THE LAW PROVIDED FEDERAL LAND MANAGERS THE AUTHORITY TO ASSESS CIVIL PENALTIES FOR VIOLATORS. THIS LAW DIRECTED THE SECRETARIES OF INTERIOR, AGRICULTURE AND DEFENSE TO SET FORTH RULES AND REGULATIONS WHICH FOSTER INCREASED COOPERATION AND EXCHANGE OF INFORMATION BETWEEN GOVERNMENTAL AUTHORITIES, PROFESSIONALS, AND PRIVATE INDIVIDUALS.

DURING THIS SAME PERIOD OF TIME, WE IN THE CONGRESS DISCOVERED THAT THERE WAS AN INCREASED GENERAL INTEREST IN ARCHAEOLOGICAL RESOURCES IN THE CHACO CANYON AREA. THIS INTEREST CAME AT A TIME WHEN THERE WAS EXTENSIVE EXPLORATION AND DEVELOPMENT FOR A WIDE VARIETY OF ENERGY RESOURCES, INCLUDING COAL, URANIUM, OIL AND NATURAL GAS IN THE SAME AREA.

WE WERE FACED WITH THE CHALLENGE OF HOW TO, SIMULTANEOUSLY, DEVELOP IMPORTANT ENERGY RESOURCES, UPHOLD VALID AND EXISTING RIGHTS OF EXISTING PRIVATE PROPERTY OWNERS AND PRESERVE THE ARCHAEOLOGICAL INTEGRITY OF THE AREA. AT THAT TIME I HELD MEETINGS TO SEE IF WE COULD FIND A SOLUTION TO WHAT APPEARED TO BE CONFLICTING PURPOSES. ULTIMATELY WE PASSED P.L. 96-550 IN 1980 - WHICH INCLUDED AS ONE OF ITS TITLES THE CHACO CULTURE NATIONAL HISTORICAL PARK.

THE PURPOSE OF THE CHACO CULTURE LAW WAS THREEFOLD. FIRST, IT RECOGNIZED THE UNIQUE ARCHAEOLOGICAL RESOURCES IN THE CHACO CANYON AREA. SECOND, IT PROVIDED FOR THE PRESERVATION OF THESE RESOURCES. THIRDLY, THIS LAW ENCOURAGED COOPERATION BETWEEN FEDERAL AGENCIES, PRIVATE CORPORATIONS AND OTHER INTERESTED INDIVIDUALS SO THAT DEVELOPMENT WHICH WAS COMPATIBLE WITH PRESERVATION COULD BE OBTAINED.

THIS IS AN OVERSIGHT HEARING TO INVESTIGATE WHETHER THESE LAWS ARE DOING THEIR INTENDED JOB. CLEARLY, ANY LAW THAT PROTECTS ARCHAEOLOGICAL AND PALEONTOLOGICAL SITES SHOULD BE PERIODICALLY REVIEWED TO DETERMINE IF IT IS WORKING AS INTENDED AND IF NOT, WHAT CHANGES SHOULD BE MADE. THAT IS THE PURPOSE OF THIS HEARING.

I WANT TO THANK SENATOR BINGAMAN FOR REQUESTING THIS HEARING. HOPEFULLY, THROUGH THE TESTIMONY WE WILL HEAR TODAY WE CAN DISCOVER SOME IMPORTANT FACTS THAT WILL ALLOW US A BETTER UNDERSTANDING OF THESE ISSUES.

TODAY, SENATOR BINGAMAN AND I WILL RECEIVE TESTIMONY FROM MANY DIFFERENT WITNESSES. WE WILL HAVE THE OPPORTUNITY TO HEAR FROM EXPERT ARCHAEOLOGISTS, PALEONTOLOGISTS, CURATORS, LAW ENFORCEMENT OFFICIALS AND LAND MANAGERS. THESE WITNESSES WILL HOPEFULLY IDENTIFY THE PROBLEMS CONNECTED WITH PROTECTION, ACCESS, CURATION, ENFORCEMENT AND MANAGEMENT ON THESE SITES. SUGGESTED SOLUTIONS TO ANY OF THESE PROBLEMS ARE WELCOME.

SENATOR BINGAMAN AND I WILL LISTEN TO THE TESTIMONY PRESENTED HERE TODAY AND ASK QUESTIONS ABOUT THESE VERY IMPORTANT SUBJECTS. WE WILL TAKE COPIES OF THE TESTIMONY AND ANSWERS TO OUR QUESTIONS BACK TO WASHINGTON. WE WILL STUDY WHAT WAS SAID HERE TODAY AND IF LEGISLATIVE CHANGES ARE NEEDED, WE WILL PURSUE THEM IN THE SENATE.

THE HEARING WILL BE HELD IN THE ORDER POSTED ON THE WITNESS LIST IN THE HALLS. IF YOU NEED A COPY OF THE WITNESS LIST, THE STAFF WILL BE HAPPY TO PROVIDE YOU WITH ONE.

Out of fairness to all who wish to testify, I ask that the witnesses limit their oral testimony to 3 minutes. Your entire written statement will be included in the hearing record. Witnesses have been placed in panels. Please hold on to your testimony until your panel is called to the witness table.

The lights are just like traffic signals--green is go, yellow is one minute remaining, and red means your time is up.

If you wish to receive a printed copy of the hearing record please put your name and mailing address on the lables in the lobby. A copy will be mailed to you when printed. The hearing record will remain open for two weeks if you wish to provide additional information or a statement send one copy to my office or Senator Bingaman's office here in Albuquerque or to the Subcommittee office in Washington, D.C.

Again, I wish to thank all the witnesses and organizations for coming out on a holiday to help us review these laws and their effect on us.

STATEMENT OF HON. JEFF BINGAMAN, A U.S. SENATOR FROM THE STATE OF NEW MEXICO

Senator BINGAMAN. I just wanted to start by thanking Senator Wallop, chairman and Senator Bumpers, the ranking minority member of the Subcommittee on Public Lands in the Senate Energy and Natural Resources Committee for agreeing to have this hearing. I want to thank as well, Senator Domenici, for agreeing to Chair the hearing. He has had a longstanding interest and involvement in these issues as he described.

I requested this oversight hearing so that we could establish how well we are implementing the laws involving cultural resources that Senator Domenici was instrumental in getting passed several years ago.

I am impressed with the list of witnesses that we put together for this hearing. I think it is an indication of how many capable, nationally known and internationally known individuals we have, particularly in the southwest, dealing with these important issues. The problem as I see it, is that the organized looting and theft of our archeological sites seems to be on the increase. It seems to be somewhat greater in particular areas of the Southwest. We face these threats to our resources at the same time we are experiencing dwindling Federal dollars. So the issue, as I see it, is how do we reconcile these two things. What can we do, which does not require great additional resources to try to protect the literally hundreds and thousands of archeological sites that exist here in the Southwest and throughout the Nation. I think the laws, perhaps, that have been written have not always been interpreted the same way by different agencies. I think that clearly one objective of the hearing is to focus attention on the need to get a uniform interpretation and implementation of the laws.

Finally, let me just say, I think the one main purpose of the hearing is to create a record of testimony from experts and people involved in this issue that can be brought to the Congress in case we determine that additional legislation or clarification of legislation is needed. We need to also determine what can be done by the Congress to help agencies carry out their responsibilities, and perhaps identify additional ways that once these cultural resources are found, they can be properly protected. I would just stop at that and say that I look forward very much to the testimony.

Let me say that I'm informed that Dr. Linda Cordell, director of department of anthropology at UNM and Vincent Yannie, curator of exhibits at Maxwell Museum are responsible for these exhibits we have in the hall today, and I think they are to be commended on those. They are beautiful exhibits. They give us a good clear notion of the value of what we are here discussing today. I thank you for involving me in this, Pete.

[The prepared statement of Senator Bingaman follows:]

STATEMENT BY SENATOR JEFF BINGAMAN
Archaeological Field Hearing
October 14, 1985

MR. BINGAMAN. Mr. President, I thank Chairman Wallop and the ranking minority member of the Subcommittee on Public Lands Senator Bumpers, for honoring my request for a hearing on the very important issue of protecting our nations archaeological sites. I also thank Senator Domenici for agreeing to join me today and for serving as chairman of this hearing.

We are fortunate to have some of the foremost authorities on archaeology in this area presenting testimony. The number of people present attests to the interest we all have in hearing these experts and reflects the importance New Mexicans feel for protecting our cultural heritage.

Today we are more acutely aware than ever of the neec to preserve our past for present and future generations to enjoy.

We are faced with the increasing challenge of how to adequately protect hundreds of thousands of significant archaeological sites in our country in the face of dwindling federal dollars and increased organized looting and theft.

We are confronted with a significant threat to our cultural heritage - a heritage we must not lose. Over the years, the Congress has enacted a variety of laws to protect our archaeological resources. There are laws on the books to make federal agencies responsible for identifying sites on federal and tribal government lands, determine the significance of these resources and to recover, record, and preserve them.

Unfortunately, these laws are not always interpreted by the agencies in the same way. This has prevented the agencies from being able to coordinate their actions to adequately manage and protect our cultural resources.

A diminishing budget for cultural resource management and protection compounds the problem. Fewer dollars are available to correct an ever growing problem.

I am interested in seeing our policymakers recognize the significance of the threats to our cultural resources and to take necessary action to counter the threats.

I have identified several areas where I think we can make improvements; however, we must act quickly if we are to save our remaining cultural resources. As a member of the Senate Energy and Natural Resources Committee, which has oversight responsibility for this area, I want to see reforms implemented. I want to heighten the awareness of policymakers and the general public as to the importance of preserving our past for future generations.

There are many areas in our federal archaeology program that can benefit from increased or targeted funding; however, in this time of budget restraint we must first look for ways to use existing resources to their fullest potential.

It is my hope that this hearing will accomplish three objectives.

1. Provide an accurate record for the Congress of the current problems in our federal archaeological program in order to justify the resources necessary to correct those problems.

2. Determine how the federal agencies that have the mandate for managing and protecting our cultural resources are carrying out their responsibilities.

3. Identify specific steps that can be taken to improve the management and protection of our cultural resources.

The BLM included this statement in one of its publications a few years ago.

> "The past belongs to the future....
> but only the present can preserve it."

It is my belief that if we achieve the goals we have set for ourselves today we will have made an important step in the preservation of our heritage.

Senator **Domenici**. Thank you for that fine opening statement. Shall we proceed? We are going to have to do this in a little unorthodox manner. The witnesses are out here, but we can't do that so they are going to be over here. We will take panel No. 2, Tom Merlan, State historic preservation officer; Johnathan Ware, curator of archeology; David Phillips, director of research lab of anthropology, Museum of New Mexico, Santa Fe. Could we have those three witnesses open this?

Mr. **Merlan**. I don't see John Ware and David Phillips.

Senator **Domenici**. They are not scheduled to go on until second, Tom. Why don't we do this. If it's all right with you, we will take the third panel and get to you in a minute. Do we have Gilbert Pena, Anthony Klesert here? How about Gilbert Pena?

My idea isn't working, is it? Why don't we do this, in any event. We are not too sure that Gilbert Pena is going to come. Tom, why don't you go ahead and give your testimony and in the meantime, Anthony would you come on up and be sort of part of this panel and we will sort this out when we are all through.

Mr. **Merlan**. Shall I go ahead, Senator?

Senator **Domenici**. Yes, sir. Just both be seated. All right. You have a written statement? Is this your written statement?

Mr. **Merlan**. Yes.

Senator **Domenici**. It will be made a part of the record. Proceed.

STATEMENT OF TOM MERLAN, NEW MEXICO STATE HISTORIC PRESERVATION OFFICER, OFFICE OF CULTURAL AFFAIRS

Mr. **Merlan**. Thank you, gentlemen, for this opportunity to address the subcommittee. That written statement is rather long and lengthy statement in some detail, which compares and contrasts the activities of nine Federal agencies, and I won't attempt even to summarize that statement which is for the record. I just want to make some brief verbal comments.

Our office, the historic preservation division of the office of cultural affairs has been involved in the business of preserving and protecting antiquities for about 15 years. I would like to add that we have generally had active support from State administrations and Gov. Toney Anaya asked me to be here on his behalf today to make these comments.

The first point I would like to make is that the Historic Preservation Act of 1966, which has been amended several times and most recently and significantly in 1980, calls for a partnership primarily between the Federal and State governments, but involving other entities, as well. Indian tribes, for example and municipalities are increasingly important in that partnership. We are not talking simply about the responsibilities of Federal agencies. We are talking about various mutual responsibilities. Sections 101 and 110 of the Historic Preservation Act describe the responsibilities of Federal agencies under the State preservation programs in substantially similar terms. If we are going to make the system work, it has to work as a partnership.

That leads me to my second point, which is that although there are some very fine examples of cooperation between and among State programs and Federal agencies, at the moment, there's nothing that could be described as a general partnership. That may have to do to some extent with the attitude of this administration, which is, frankly, hostile to this program. I think you are probably all aware that every year since 1980 the executive branch budget has recommended zero funding for the Historic Preservation Act. That is a zero allocation from the historic preservation fund and in this administration as well, we have seen the proliferation of Federal policies and guidelines which run contrary to the Historic Preservation Act.

My testimony includes a few examples. Oil and Gas Order No. 1, issued by the Bureau of Land Management, for example. Interim directive No. 6 issued by the Forest Service. A directive issued by the Bureau of Indian Affairs on March 1 of this year, which declares that certain broad categories of archeological sites are simply not significant and makes this declaration without any attempt to refer to the established process for determining significance. I don't want to dwell on these things. I just want to mention that they reflect the attitude of this administration, which has allowed the Historic Preservation Act to be set aside in a number of important occasions and has permitted and perhaps encouraged Federal agencies to run contrary to it.

I also want to say that while pot hunting and vandalism on the public lands are a problem, they are not, in my opinion, and based on the facts that I have at my command, they are not nearly as much of a problem as are the particular problems of the damage to and destruction of archeological sites by activities actually authorized by Federal agencies and again, examples can be drawn from various agencies. We continue to see them.

I have some basic recommendations to make. One is that the continuing inventory and evaluation of cultural properties be made a priority across Federal departments by secretarial order, by internal directive, by whatever means are necessary, and that we proceed in the spirit of Executive Order 11593, which has existed since 1970 and the Historic Preservation Act to obtain the inventory which is necessary if we are going to evaluate properties and have and be able to make the necessary comparisons.

I think that in many instances Federal agencies are weak in the area of oversight and monitoring of the things that they authorize. The example that I have given you in my testimony is the Department of Housing and Urban Development which is now engaged in very large-scale housing rehabilitation on Indian Reservations, including the New Mexico pueblos. We have had some recent problems arising from the fact that HUD has provided large sums of money to the pueblos and very little oversight of what it is they actually do. And most of the pueblos are either on the national register of historic places or eligible for it. It is impossible to carry out these renovations and to obtain housing without sacrificing the historical character of those communities.

I mention this, which has to do with architecture, but which also has to do with archeology since most of the pueblos are also historic and prehistoric archeological sites. I think it's extremely important that we obtain computerized data bases of archeological properties nationwide, and it's my opinion that these should be established on a State basis. Most States are working on something of the sort. I think here in New Mexico we have gone far in creating a data base, which is readily retrievable and enables us to make the comparisons which are necessary to evaluate sites, and we have had distinguished cooperation from a number of Federal agencies and without wanting to leave any out, I would just like to mention that the Bureau of Land Management has been particularly helpful to us and has made available to us the graphic capability that it has developed.

Senator **Domenici**. Your time has run out. We will let you go on for a little longer if you like.

Mr. **Merlan**. I will just mention a couple of other things. The allocation for restoration and rehabilitation of paleontology were cut off in 1980. We have only received them once since under the jobs bill in 1983. If those funds were restored we would be able to do demonstration projects and be able to train curators. The Advisory Council on Historic Preservation is attempting to introduce a new and streamlined version of its Governmentwide regulations and it has just been given, after 4 years of trying, it has just been given permission from OMB to publish 36 CFR 800 and needs the cooperation of other Federal agencies to finalize the regulation. I would also like to mention the idea of making the historic preservation fund a trust fund, the interest from which would support the State programs.

These various ideas, gentlemen, in my opinion, deserve to be followed up and will go a long way toward solving the problems we are faced with and that you will hear more about from other witnesses.

[The prepared statement of Mr. Merlan follows:]

TESTIMONY
OF THE NEW MEXICO STATE HISTORIC PRESERVATION OFFICER
TO THE
PUBLIC LANDS, RESERVED WATER AND RESOURCE CONSERVATION SUBCOMMITTEE
OF THE
SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES
October 14, 1985

Thank you for the opportunity to address the Subcommittee about the way in which land-managing agencies are managing, protecting and preserving archeological sites in New Mexico. I have been requested by Governor Anaya to address you on his behalf about the State historic preservation program and its relationships with federal agencies.

Our office (Historic Preservation Division, Office of Cultural Affairs) has prepared a detailed statement characterizing the performance of nine federal land-managing agencies. I would like to offer brief comments.

The National Historic Preservation Act of 1966, as amended, contemplates a partnership in historic preservation between federal agencies and States. Sections 101 and 110 of the Act use substantially similar language to describe the responsibilities of federal agencies and State preservation programs.

There are some strong relationships between some State programs and some federal agencies at the regional or State level. There is no general partnership. This may be because the Reagan administration has made systematic efforts to abrogate and to frustrate the operation of the Historic Preservation Act. Every executive branch budget since 1980 has recommended a zero allocation to the Historic Preservation Fund, on which the State programs depend. The nationwide regulation which implements the law is 36 CFR 800, issued by the Advisory Council on Historic Preservation in January, 1979. The Council has regulatory authority, and has been trying since 1981 to issue a simplified version of the regulation. The Office of Management and Budget has blocked publication of the regulations for four years. The Council finally received permission to publish last week (a regulation will probably be issued in November). The Justice Department has stated its opinion that the current and proposed regulations exceed the congressional intent, despite court decisions and congressional committee reports to the contrary.

Various federal agencies have issued regulations and adopted procedures at variance with the Act. Examples are the Bureau of Land Management's Oil and Gas Order No. 1, which permits and encourages holders of private surface over federal minerals to refuse to allow archeological surveys prior to federally-authorized mineral development; U.S. Forest Service Interim Directive No. 6, which instructs the Service not to perform cultural resource surveys or nominate sites to the National Register of Historic Places except in limited circumstances; a Bureau of Indian Affairs policy statement of March 1, 1985 which states that inventory survey of areas of effect is usually unnecessary and declares that certain broad classes of archeological sites are not significant; Unsuitability Criterion No. 7 of the Office of Surface Mining, which states that only publicly-owned properties listed on the National Register of Historic Places (as opposed to private properties or Register-eligible properties which will be affected by mining) may be declared unsuitable for mining.

Some of these directives are being actively enforced; some are dormant; the OSM unsuitability criterion has been voided by a court decision. Taken as a group, they demonstrate that the administration has permitted and encouraged federal agencies to set aside the Historic Preservation Act. At the same time, federal oversight of the State programs has become increasingly stringent. Despite bipartisan congressional support, the Historic Preservation Fund allocations keep getting smaller. The States are doing virtually all the work in some program areas (e.g. National Register nominations).

I recommend:

that federal agencies be instructed, from the Department Secretary level, to make cultural resource inventories of lands under federal ownership and control a priority, as contemplated in presidential Executive Order 11593 and the Act itself. We are severely hampered by fragmentary information. The State programs should be specifically authorized and encouraged to perform cultural resource surveys on federal lands. States have state-wide cultural resource inventory responsibility under the Act. The typical situation now, however, is one in which States write nominations for federal properties and pass them up to federal Washington offices, where they often wait for years before being acted on.

that all federal agencies provide for direct cultural resource professional oversight and monitoring of land-modifying activities that will affect significant cultural resources. Some agencies, such as the Department of Housing and Urban Development, have little or no such oversight of grants running into the hundreds of thousands or millions of dollars. Most federal agencies are weak in the area of oversight and monitoring of the projects they authorize.

that computerized data bases of all known or registered sites be established on a State basis, with federal agency participation and cooperation, to maximize the usefulness of the information we do have. Most States have established such data bases.

that allocations to States for restoration and rehabilitation of historic structures once again be authorized by the Congress, as they were consistently from 1966 to 1979, to permit demonstration projects and programs for training conservators and stabilization experts. I also recommend that the Historic Preservation Fund be converted into a trust fund from which annual interest will constitute the allocation to the States.

that federal land-managing agencies assist the Advisory Council on Historic Preservation to finalize new regulations consistent with the regulatory authority it now has in law.

AGENCY: U.S. Forest Service

ACREAGE IN NEW MEXICO: 9.3 million acres (approximately 12% of the State).

NO. SITES IN STATE ARCHAEOLOGICAL INVENTORY: 3992 (9.5% of sites included in the State inventory)

SUMMARY OF MANAGEMENT: The Forest Service has major problems with controlling timber-related damage to archaeological sites and completing the Section 106 review process. This has resulted in current legal action by the State of New Mexico. Cultural resources are generally considered as secondary concerns. Inventories are conducted only in relation to proposed development projects, rather than for long-term multiple resource planning purposes. That this attitude will persist is evident in the recent ten-year management plans issued pursuant to Forest management and planning laws.

Inventories for development projects are frequently inadequate and completed by para-professionals without adequate professional field supervision. The Forest Service is the only major federal agency which does not routinely use professional staff for archaeological surveys. It is the only major federal agency in New Mexico that does not actively cooperate with the State in maintaining an up-to-date centralized statewide inventory of archaeological resources. This makes statewide cultural resource planning very difficult, particularly in those portions of the State where the Forest Service is the major landholder.

The general attitude seems to be that the Forest Service can develop its own framework for decision-making, rather than working to strengthen the State-federal partnership established by the National Historic Preservation Act. In spite of its responsibilities under Section 110 of the NHPA, the Forest Service has conducted few systematic archaeological inventories other than for development projects. National Register nominations and site restoration projects have been extremely low priorities. Instruction memoranda such as Interim Directive Number 6 sought to severely limit the amount of inventories to be completed on New Mexico Forests.

Regarding vandalism, the Forest Service was active in developing cultural resource law enforcement materials during the late 1970s to early 1980s. Vandalism is probably the most severe in southwestern New Mexico, although increased recreational use of other forests has also resulted in some vandalism of major ruins. Prevention of vandalism is important. However, this should not deflect attention from the fact that Forest Service-authorized actions are a major cause of damage to and destruction of archaeological sites.

RECOMMENDED CHANGES: The Forest Service must conduct appropriate surveys for, and monitor development-related activities much more closely to insure that sites are not destroyed by timber-related activities such as logging, site preparation and road construction. When damages are noted, the Forest

Service should take immediate steps to recover the cost of restoration and repair sites.

The Forest Service should also insure that sites are not destroyed by indirect impacts such as erosion. When such deterioration is noted, steps should be taken to stabilize and protect sites.

The Forest Service should cooperate more actively with the State in maintaining a centralized statewide archaeological inventory. In cooperation with the State, the Forest Service should develop priorities for long-range inventories, National Register nominations, and repair of sites that are deteriorating from natural causes.

Para-professionals should be used for archaeological surveys only with adequate professional field supervision.

AGENCY: Bureau of Land Management

ACREAGE IN NEW MEXICO: 12.7 million acres (approximately 16.3% of the State).

NO. SITES IN STATE ARCHAEOLOGICAL FILES: 7,744 (18.4% of total sites in the State inventory).

SUMMARY OF MANAGEMENT: In general, BLM seems to regard archaeological sites as valid resources to be managed along with their other resources, rather than as peripheral concerns. BLM has taken an affirmative approach towards the management of some of the larger sites on their lands, such as the Chaco Protection Sites and Navajo Refugee sites. In the late 1970s through early 1980s, the Bureau had an active archaeological site stabilization program. More recently, the BLM completed a comprehensive study of prehistoric Chacoan roads in the San Juan Basin and several other planning studies to determine the impacts of proposed coal development in the area.

The BLM has been active over the last several years in updating its archaeological files and trying to insure that all sites and surveys are submitted to the State's computerized inventory of archaeological sites. Such a statewide comprehensive data system is needed to insure that archaeological resources are taken into account at the planning and development stages by all agencies and levels of government.

In its planning process, the BLM has taken steps to give special management designation to areas of particular archaeological sensitivity. In addition to requiring inventories for specific development projects, the BLM has also conducted a number of planning scale inventories in various parts of the State. However, the fact that it has so much land area to administer means that cultural resources often continue to be considered primarily in a crisis-management manner just prior to development. The BLM needs to continue to place priority on conducting planning scale inventories in order to best integrate cultural resources into its multiple resource mandate.

In terms of ongoing management projects, BLM generally requires intensive inventories for all proposed development projects. BLM has a generally good process of monitoring surface-disturbing projects to insure that sites are not damaged and that archaeological clearance stipulations are enforced.

BLM's main management problems for archaeological resources result from large-scale land transfers and mineral development instructions, such as Onshore Oil and Gas Order Number 1, which conflict with the National Historic Preservation Act.

The BLM has considerable discretionary authority for land transfers. The agency has on occasion failed to provide for adequate inventory and long-range protection of archaeological resources on such lands. The Bureau has a policy of preserving unique archaeological resources in public ownership. However, it does not always follow this policy.

Regarding mineral development regulations, Onshore Oil and Gas Order Number 1 establishes standards and procedures for archaeological protection which are inconsistent with the provisions of the National Historic Preservation Act. Coal Unsuitability Criterion 7 is also inconsistent with the National Historic Preservation Act in implying that only it applies only to publicly-owned sites which are on the National Register, rather than privately-owned and eligible sites.

Regarding other impacts such as vandalism, the fact that most BLM lands have unrestricted public access means that vandalism is difficult to control. The situation on BLM lands in New Mexico at present does not appear to be as severe as in southeastern Utah. However, particularly in southern New Mexico, ORV use of BLM lands appears to be a significant cause of site damage. This is a result of direct vehicular damage to fragile sites, as well as the fact that ORVs can provide access to remote sites which are then vandalized. More active measures should be taken to monitor impacts to sites in such areas.

RECOMMENDED CHANGES: Overall, the BLM needs to be far more conservative in selecting lands for transfer. The BLM must take its existing policy to preserve unique archaeological resources in public ownership more seriously. The BLM needs to fulfill its current obligations for archaeological protection resulting from previous land exchanges.

The BLM should amend Onshore Oil and Gas Order Number 1 so that the order is consistent with the National Historic Preservation Act.

The BLM should place greater priority on completing systematic inventories of a certain percentage of its lands each year so that archaeological protection can be better integrated into long-range multiple resource planning and development efforts. Additional priority should be placed on completion of National Register nominations of known sites. Steps should also be taken to stabilize and protect sites which are being eroded.

To help reduce the degree of vandalism, there should be more patrol of back-country areas, with emphasis on regular visits to sites which appear to be vulnerable to vandalism. Increased inspection is particularly needed when the BLM opens up previously inaccessible areas to mineral development and in recreational areas. Monitoring of areas that are heavily utilized by ORVs is also recommended. Increased law enforcement training classes for BLM staff may help increase the ability of the BLM to prosecute violations under the Archaeological Resources Protection Act of 1979.

In addition to its own staff efforts, BLM should encourage the cooperation of local amateurs and interested professionals in monitoring sites. Additional public education, such as radio announcements, press releases and interpretive materials may also be of assistance in deterring vandalism.

AGENCY: Office of Surface Mining

ACREAGE IN NEW MEXICO: N/A

NO. SITES IN STATE ARCHAEOLOGICAL INVENTORY: N/A

SUMMARY OF MANAGEMENT: OSM is charged with the responsibility of coordinating archaeological compliance for surface coal mines and abandoned mine lands reclamation under the Surface Mining Control and Reclamation Act. This is a critical responsibility in New Mexico, since the coal-rich parts of the State are also those rich in archaeological remains. Approximately 2,000 archaeological sites are located within current mining areas off New Mexico. Several thousand more archaeological sites may be affected under the proposed federal coal leasing program in the State.

The oversight of cultural resource concerns on coal mine operations in New Mexico is not an easy task, given the size, number and complexity of archaeological resources in the coal mining areas of the State . Many of the mines are located in the checkerboard portion of the State, which means that the task of coordinating all pertinent surface managing and regulatory agencies for cultural resource compliance is extremely complicated. OSM has only two archaeologists to oversee all the cultural resource concerns in the coal mines of 22 western states. While existing staff do an admirable job in light of these problems, this staffing level is simply not adequate for OSM's cultural resources responsibilities in New Mexico, let alone the remainder of the western States.

One of the major problems in recent years has been the reluctance of the Washington level of OSM to take its legal responsibilities for cultural resources seriously. There were attempts to bypass intensive inventories of archaeological sites on proposed surface mines, relying instead on predictive models of site locations and treatment plans decided on before sites were even inventoried. In a number of the eastern states, OSM approved state regulatory programs that did not adequately provide for archaeological protection. This pressure seems to have abated somewhat, primarily in response to legal action.

Overseeing the long-term condition of sites to be avoided by mining operations is currently a weak point in OSM's enforcement. Stipulations should be included in mine plan approvals to provide for periodic inspection of such sites. Otherwise the issue of long-term protection is left up to the surface-managing agency.

Regarding implementation of archaeological programs, OSM needs to insure that all archaeological treatment plans include specific provision for curation of artifacts and records. This is critical, since the majority of major excavations conducted in the State are related to coal mine development. These collections will be essential future research tools. OSM also needs to continue to insure that site records are provided to the State's comprehensive inventory on a regular basis.

RECOMMENDED CHANGES: OSM needs additional cultural resource staff if it is to be effective in carrying out its responsibilies for protecting archaeological resources pursuant to SMCRA.

OSM needs to develop clearer internal procedures for reviewing coal mine permit applications and abandoned mine lands reclamation grants. There seems to be some confusion regarding the roles of the Albuquerque Field Office and the Western Technical Center, Division of Reclamation and Enforcement in Denver, in the section 106 compliance process, which has resulted in extensive administrative delays. There are also administrative ambiguities regarding the archaeological responsibilities of the various agencies in the Indian Mine Lands Program. Lease adjustments and revisions to operating plans which may affect archaeological sites also seem to cause administrative delays.

On a state level, OSM needs to develop better procedures for coordinating cultural resource responsibilities with other surface managing and regulatory authorities to insure that archaeological protection proceeds smoothly. It is recommended that OSM work with the other surface managing and regulatory agencies to develop specific procedures for cultural resource compliance. Since these are procedural questions, this should be done within individual states, however, rather than on a national level.

AGENCY: National Park Service

ACREAGE IN NEW MEXICO: 245,000 acres (approximately 0.3% of the State)

NO. SITES IN STATE ARCHAEOLOGICAL INVENTORY: 3,048 sites (7.25% of sites in the State inventory)

SUMMARY OF MANAGEMENT: NPS has generally been a model in terms of its archaeological protection and stabilization program. Vandalism does not appear to be a major problem, since access is generally controlled within individual parks. Nonetheless, NPS administers a large number of highly significant and fragile sites which receive extensive visitation. An active stabilization program is essential.

The National Park Service has made a concerted effort to inventory archaeological sites on its lands and to protect them from damage. Most of the focus of inventory has been in the cultural parks and monuments such as Chaco Culture National Historic Park. A harder look should also be taken at how archaeological resources are being managed in more nature-oriented parks such as Carlsbad Caverns National Park (117 documented sites) and White Sands (73 sites) and Capulin National Monuments (1 site).

It is also essential for NPS to monitor its own development activities within parks to insure that such developments do not impact archaeological sites. Within its parks, surface-disturbing activities such as new roads, campgrounds, buildings, etc. are dealt with by means of a programmatic memorandum of agreement with the SHPO and Advisory Council on Historic Preservation. This seems to be working in a satisfactory manner.

Outside of the parks, NPS is the federal coordinating agency for National Historic Landmarks. However, little attention has been devoted to their protection and repair. Recently NPS has been updating the information on these sites, including preparation of historic structures reports, but has generally failed to inform the State of such activities.

RECOMMENDED CHANGES: NPS should carefully and without exception monitor all of its internal surface-disturbing activities.

NPS guidelines for cultural resource management (NPS-28) suggest a tendency for NPS to revert towards developing themes for archaeological resources. This may result in increased emphasis on certain types of archaeological resources to the detriment of others. It is recommended that NPS give appropriate consideration to all classes of sites.

NPS sometimes tends to have an insular attitude towards other land-managing agencies and cultural resource management concerns outside the boundaries of their parks. The NPS should not develop regional planning processes that duplicate the efforts of the states. NPS should seek to increase its level of cooperation with other land-management agencies regarding archaeological protection.

AGENCY: Bureau of Reclamation

ACREAGE IN NEW MEXICO: 198,000 acres (approximately 0.25% of the State)

No. SITES IN STATE ARCHAEOLOGICAL INVENTORY: 572 (1.4% of recorded sites in the State inventory)

SUMMARY OF MANAGEMENT: While the Bureau of Reclamation owns only 0.25% of the land in New Mexico, it has 1.4% of the recorded sites in the State. This indicates a high degree of effort to inventory sites on its lands.

Over the past several years, the Bureau of Reclamation has been one of the better examples of federal-state cooperation in regard to archaeological protection. In cooperation with the State, the Bureau of Reclamation has sponsored a series of inventories along the Rio Grande. This has resulted in the preparation of a number of National Register nominations for significant archaeological sites in the middle Rio Grande Valley and in parts of the Elephant Butte and Caballo Reservoir areas. In the Upper Gila River drainage, the Bureau of Reclamation has also sponsored several inventories in preparation for proposed water development projects.

RECOMMENDED CHANGES: Since the Bureau of Reclamation is involved with reservoirs, canals, and other kinds of water management projects, the agency should make a strong effort to insure that sites are not damaged by primary or secondary activities. In addition to its own lands, the Bureau of Reclamation has permit authority over many other kinds of activities that takes place on other lands. Such permitted or licensed activities must be done in consultation with the SHPO.

The Bureau needs to develop better cooperative arrangements with local water management groups such as the Middle Rio Grande Conservancy to insure that authorized activities do not impact significant archaeological sites. Many important prehistoric and historic ruins are located near the major rivers of the State, where they may be impacted by such development activities.

The Bureau of Reclamation should continue its efforts to inventory its sites across the State. It should take active steps to conduct inspections of sites that may be prone to vandalism outside of the floodpool of reservoirs under its jurisdiction. Where recreational lands are leased, the Bureau should take steps to establish cooperative arrangements for protecting sites from vandalism.

AGENCY: Army Corps of Engineers

ACREAGE IN NEW MEXICO: 28,000 acres (approximately 0.4% of the State

NO. SITES IN STATE ARCHAEOLOGICAL INVENTORY: 239 (0.6% of the recorded sites in the State files)

SUMMARY OF MANAGEMENT: The Corps of Engineers is the only federal agency in New Mexico that has completed an intensive inventory of their lands. To be sure, it has the smallest acreage of any major agency, but it can give interested agencies some idea of what is actually involved in inventorying 43 square miles. It also sponsored a number of high-quality archaeological excavation projects for some of the reservoir construction projects of the 1960-70s. The results of some of these projects should be published. The Corps is presently in the process of preparing a series of interstate cultural resource overviews that will integrate archaeological concerns in a number of states.

In addition to its reservoir and flood control activities, the Corps of Engineers also issues permits under the Section 404 process for undertakings affecting navigable waters. The overall attitude of the agency seems to be one of careful compliance with the law.

RECOMMENDED CHANGES: General compliance-oriented management seems generally adequate. However, long-range management for archaeological resources is more questionable. This is especially true in regard to sites that are affected by increased erosion or recreational use around the perimeter of reservoirs.

The Corps should take definite steps to control erosion on sites under its jurisdiction. It should also inventory sites that are in the larger flood pools of their reservoirs. The Corps should also conduct periodic inspections of known sites near reservoirs with heavy recreational use to protect such sites from vandalism.

AGENCY: Bureau of Indian Affairs

ACREAGE IN NEW MEXICO: 301,701 acres (471 sq.mi.) (This figure is taken from Department of Interior FY 1982 Public Lands Statistics and includes only certain types of BIA-administered lands)

No. SITES IN STATE ARCHAEOLOGICAL INVENTORY: 432 (1% of all recorded sites in the State inventory)

SUMMARY OF MANAGEMENT: BIA has established a fairly strong cultural resource management program in both its Albuquerque and Navajo area offices. They have sponsored some inventories for long-term planning purposes as well as requiring inventories for specific development projects. BIA conducts thorough inspections of major land-disturbing projects such as coal mines to insure that surveys have been adequately done and that archaeological stipulations such as site avoidance are being enforced.

The BIA also offers technical assistance to tribal governments regarding archaeological compliance matters on other Indian lands across the State. Inventories on other Indian lands in New Mexico have resulted in the documentation of approximately 11,208 sites, or approximately 25% of all recorded sites in the State. A number of these inventories have been completed by other surface-managing agencies and private organizations. Nonetheless, given the number of sites involved, this is a large responsibility.

The BIA has some problems regarding historic preservation responsibilities concerning rehabilitation and reuse of historic properties, as in the case of Fort Wingate. Other problems have occurred as a result of HUD and CDBG-funded housing rehabilitation projects.

Washington-level BIA has issued instruction memoranda (March 1, 1985) that seem contrary to the National Historic Preservation Act and its implementing regulations. BIA's instruction memorandum of March 1, 1985 discourages inventory and declares that certain broad classes of sites such as lithic scatters are not eligible for the National Register. This is not consistent with federal regulation.

RECOMMENDED CHANGES: The instruction memorandum of March 1, 1985 should be rescinded or changed so that it complies with 36 CFR 800 and 36 CFR 60.

There is a need for better coordination between the Environmental Quality Division and Branch of Facilities Management to insure that historic structures are adequately protected.

There is also a need for better procedural arrangements with the Office of Surface Mining regarding Indian mine lands, so that the cultural resource review process and responsibilities of each agency are more clearly outlined. Such clarification is needed for initial review processes as well as lease revisions and modifications to currently-operating mines.

Efforts should be made to simplify cultural resource review processes.

More priority should be placed on site stabilization and National Register nominations. Additional efforts should be made to increase patrols of known significant sites, particularly as new areas are opened up to development.

AGENCY: Department of Defense

ACREAGE IN NEW MEXICO: 2.5 million acres (approximately 3.5% of the State).

NO. SITES IN STATE ARCHAEOLOGICAL INVENTORY: 773 sites (approximately 4.5% of sites in the State inventory)

SUMMARY OF MANAGEMENT: For the most part, Department of Defense lands are off-limits to the general public. This has reduced the overall amount of vandalism to archaeological sites on such lands in New Mexico. However, many Defense-sponsored activities, such as tank maneuvers involve major land disturbance which can destroy archaeological sites. To forestall this possibility, the Department of Defense has taken a number of steps to insure that sites are not damaged by department-authorized activities. This has included education of staff regarding their archaeological responsibilities.

In recent years, the Department of Defense in New Mexico has taken its historic preservation responsibilities seriously and has sponsored the preparation of overall cultural resource management plans for its facilities. White Sands Missile Range is in the process of completing an overall historic preservation plan for its lands. Fort Bliss also has an overall cultural resource management plan. Both plans include cooperation with the State in maintaining a statewide inventory of archaeological properties. It is anticipated that all site records for Fort Bliss will be included in the statewide archaeological inventory by the end of the year.

Both posts have completed major surveys of impact areas such McGregor Range and training maneuver areas and are in the process of completing an update of their archaeological records.

Cannon Air Force Base has also sponsored inventories of portions of its lands, primarily for planning purposes, but in general the Air Force's program has not been as active as that of the Army. Over the past couple of years, Cannon and Holloman Air Force Bases have begun to develop cooperative agreements with the Army Corps of Engineers for assistance with their archaeological compliance needs.

Stabilization efforts at White Sands Missile Range were recently completed at the MacDonald Ranch and the V-2 missile launch complex.

RECOMMENDED CHANGES: The Department of Defense needs to maintain a thorough review of its own activities to insure that they do not damage archaeological sites. A strong program of inventorying, evaluating, and nominating sites to the National Register should be implemented as recommended in the long-range management plans. Steps should also be taken to restore sites which are deteriorating or eroding. Continuing efforts should be made to increase educational and interpretive programs.

AGENCY: U.S. Fish and Wildlife Service

ACREAGE IN NEW MEXICO: approximately 320,000 acres (approximately 0.4% of the State).

NO. SITES IN STATE ARCHAEOLOGICAL INVENTORY: 25 (.06% of the recorded sites)

SUMMARY OF MANAGEMENT: The Fish and Wildlife Service has generally few new surface-disturbing developments of their own, and few outside developers on its lands. Nevertheless, surface disturbing activities must be completed only after Section 106 consultation. Several years ago, the Fish and Wildlife Service cooperated with the State in allowing inventory of several major archaeological sites on its lands near Socorro.

RECOMMENDED CHANGES: The Fish and Wildlife Service needs to insure that developments such as canal work on refuges do not impact archaeological sites. Additional efforts should be made to complete archaeological inventory of Fish and Wildlife Service Lands and to stabilize sites which may be endangered by flooding or development. Interpretive archaeological exhibits would be appropriate for refuge areas with public visitation such as Bosque del Apache.

Senator **Domenici**. Thank you very much. I would mention, with reference to the advisory council and the OMB, that the chairman of the full committee in the Senate, Senator McClure, as you might know, has come down rather strong on the side of the advisory council in terms of the regs and that's still an unresolved issue and we will see how it comes out. I also, for the record, would like you to know that in spite of budgets coming to the Congress with a zero figure, we have been insisting on about $25 million, is my recollection, for the activity that Dr. Merlan has referred to. So then the issue remains, if the money is there as contrasted with the zero reg, it's been in a couple of administration budgets for the Federal land managers in terms of the contention that you were not interested. We hope that you will be prepared to discuss that when you take the witness stand because that is a very serious allegation and we would like to get your views on what you are doing since we are sending you the money and what is the attitude of the various departments.

Mr. **Merlan**. Senator, Dr. Ware and Dr. Phillips are here. This is the last time, presumably, that they will trust the Senate.

Senator **Domenici**. On timewise?

Mr. **Merlan**. Yes.

Senator **Domenici**. They should have been here at 9 o'clock. We will get them up here in one moment. Are Dr. Ware and Dr. Phillips here? Why don't we get you on up here now and we will finish this first panel. You weren't here when I suggested our format so let me tell you. I think we have 28 witnesses. We have to finish by 3 o'clock and everyone wants to be heard, so if you will limit your oral remarks to 3 minutes, we will insert your full statements in the record. How do you want to proceed? Are you both ready here?

STATEMENT OF DR. JOHNATHAN WARE, CURATOR OF ARCHEOLOGY, MUSEUM OF NEW MEXICO

Dr. **Ware**. My name is John Ware. I would like to testify regarding the curation practices in New Mexico. I represent the laboratory of anthropology, a division of the Museum of New Mexico that maintains the State archeological repository. Our archeological collections have been accumulating since the first decade of the 20th century. The collections are derived from over 300 major field projects involving a total or partial excavation of over 700 archeological sites. The combined total artifacts, many currently housed in the repository amounts to between 3 and 4 million artifacts. Collectively the holding represents a significant component of the known archeological record of New Mexico.

As recently as 1983 these collections were housed in six separate facilities. We are currently in the process of consolidating all the uncataloged archeological collections in a single 4,500 square foot storage facility in downtown Santa Fe. We project that when consolidation is completed in the first quarter of 1986, existing collections will consume over 85 percent of facility capacity, leaving just over 600 feet for collection expansion. The archeological repository is managed by one full-time and one part-time staff member, assisted by six part-time museum volunteers. A basic inventory reboxing effort that was begun in 1983 will require an additional 2 to 3 years to complete.

A large scale computer access designed to link the repository records with the records management system of the national preservation division was initiated in 1982 is only 15 percent complete. This project is essential to realize the research potential of the archeology collection by enabling the availability of archeology. These are just a few of the curation problems faced by the State archeological curators and the problems will multiply many times in the years to come.

Until the last 6 months, I have received eight requests for new curation contracts from firms conducting archeological research in New Mexico. This is in addition to the scores of ongoing contracts which we currently maintain. The primary objective of cultural resource management is to preserve cultural resources for future generations. With the growth of archeological contract research in future decades, a larger fraction of our cultural heritage is being preserved in museum collection and repositories. It is unfortunate for many in the archeological profession and cultural resource management field, collection, and excavation are viewed as the end of the cultural resource management process.

For the museum archeologist who is responsible for curating in perpetuity, there are vast archeological collections recovered from private and public lands each year, these service tasks are preliminary steps in the cultural preservation process. Museums throughout the State are innundated with archeological and historical data and few of us have the resources to cope with the influx of data, the warehousing of artifacts where our current problems in curation would be management, but the requirements of Federal legislation, to say nothing of our professional and ethical responsibilities demand that museums and repositories store not just artifacts but also information for future research and education.

Subsequently, it is essential that museums curate data and the data records so that they are accessible to present and future generations of scholars and archeologists. As archeological research quickens and more sites are removed from their primary disposition and placed on museum shelves, greater research demands will be placed on museum collections. It is clear that museum professionals, archeological researchers and Federal land managers have failed to come to grips with the implications of that prospect.

Senator DOMENICI. Thank you very much. Dr. Phillips, director of research lab of anthropology, Museum of New Mexico. I'm sorry that I put this panel on first. So you were a couple minutes late. You really weren't. It's my fault and I am sorry for that.

STATEMENT OF DR. DAVID A. PHILLIPS, JR., DIRECTOR OF RESEARCH, LAB OF ANTHROPOLOGY, MUSEUM OF NEW MEXICO

Dr. PHILLIPS. My name is David Phillips, and I'm from the museum of New Mexico. I will try to keep any comments brief so that no one is kept from watching the playoffs this afternoon. There are five areas which I am aware of where I feel the historic preservation process can be improved, although I believe on a whole the existing Federal laws on the historic preservation are very good ones. First, there's a great inconsistency from agency to agency in the application of the historical preservation law. Some agencies have good track records in observing the law, but other agencies appeared to fall well short of the intent of the law, either through internal regulations or through daily practice, which is one area which Congress, by exercising its watchdog function, can make an important difference.

Second, many of the archeological studies being carried out as part of the historic preservation law add very little to our understanding of the Nation's prehistory and history. The problem tends to be caused by agencies issuing large numbers of contracts for small isolated research projects. The result is odd bits and pieces of historical information. A far better approach, already practiced by some agencies, is to try to issue fewer contracts which combine related projects into a single research program. The usual result of larger scale projects is improved historical information at no change in overall cost to the Government.

Also, the Federal permitting process for archeology needs to be improved. If I had to put a single test pit into an archeological site on Federal land in New Mexico, I must obtain a special permit from Washington. This often takes more time than deadlines allow and the delay usually costs money. And quite often, it's the Federal Government that pays for the cost of that delay.

Fourth, in States where centralized registers of archeological sites do not exist, such central files should be encouraged. When site information is scattered throughout a State, it raises the cost of archeological research and again, it is often the Federal Government that must pay for the increased cost of research.

Finally, local preservation laws should be encouraged in order to protect resources not on public land and not involved in federal permits or funds. Although this is not a direct legislative concern of Congress, Federal agencies can provide information and supporting data to State and local authorities interested in enacting local preservation laws. Thank you very much.

[The prepared statement of Dr. Phillips follows:]

Monday, October 14, 1985
Testimony by David A. Phillips, Jr., Ph.D.
Research Section, Museum of New Mexico

Mr. Chairman,

Members of the committee,

My name is David Phillips and I am from the Museum of New Mexico. I believe that the existing Federal laws on historic preservation are good ones. However, there are five areas in which the historic preservation process can be improved.

First, there is great inconsistency from agency to agency in the application of historic preservation law. Some agencies have good track records in observing the law, but other agencies appear to fall well short of the intent of the law, either through their internal regulations or through daily practice. This is one area in which Congress, by exercising its watchdog function, can make an important difference.

Second, many of the archaeological studies being carried out as part of historic preservation law add very little to our understanding of this nation's prehistory and history. The problem is caused by the tendency of agencies to issue large numbers of contracts for small, isolated research projects. The result is odd bits and pieces of historical information. A far better approach, already practiced by some agencies, is to try to issue fewer contracts which combine related projects into a single research program. The usual result of larger scale projects is improved historical information, at no change in cost to the government.

Third, the Federal permitting process for archaeology needs to be improved. If I need to put a single test pit in an archaeological site on Federal land in New Mexico, I must obtain a special permit from Washington. This often takes more time than deadlines allow, and the delay usually costs money. And, quite often, it is the Federal government that pays for the cost of that delay.

Fourth, in states where centralized registers of archaeological sites do not exist, such central files should be encouraged. When site information is scattered throughout a state, it raises the costs of archaeological research. And, again, it is often the Federal government that must pay for the increased cost of research.

Finally, local historic preservation laws must be encouraged, in order to protect resources not on public land, and not involving Federal permits or funds. Although this is not a direct legislative concern of Congress, Federal agencies can provide information and supporting data to state and local authorities interested in enacting local preservation laws.

Thank you very much.

Senator **Domenici**. Thank you very much. Senator Bingaman, do you have any questions of any of the three, and then we will take our fourth witness by himself?

Senator **Bingaman**. Let me just ask Dr. Ware a question. I gather you alluded to it, but perhaps you could just elaborate a little on the extent to which the collections that you house and that are being developed here in the State, the extent to which there is actual analysis done of those, and useful analysis which scholars could then benefit from, or is this just a warehousing process that we are engaged in?

Dr. **Ware**. Most of the artifacts that have come to us in the last 23 years have been analyzed and reported on. As far as ongoing research of those collections, I think we have had a total of 20 or 30 requests in the last calendar year for access to archeological repositories, collections or ongoing research. And I consider that number very low. The repositories have a wealth of information about the prehistory and history of New Mexico, and it's underutilized. One of the reasons it's underutilized is that it's so difficult to go in and get the information you want. The material has never been in a catalog and we are in the process right now of cataloguing and accessing, which will take another 3 or 4 years.

We had a search about 2 years ago for some archeological material from the southeast part of the State. The search turned up approximately 60 percent of the material that we knew that we had, and that took a week to recover. So we are trying to address those problems. So I think that the accessibility of the collections is one of the problems that inhibits continuing research on the collection.

Senator **Bingaman**. I would like to ask Dr. Phillips a question. You made a statement, as I understood it, that some of the Federal agencies are in your view not carrying out their responsibilities under these Federal laws. Could you be more specific and tell us what you are referring to there? Which agencies and in what ways are they not carrying out their responsibilities?

Dr. **Phillips**. Well, I think that the phenomenon that there is such a new application in the Federal Government is itself of interest. At one extreme you have, for example, the Forest Service being sued at the moment over noncompliance with Federal laws. At the other extreme, you have an agency such as Bureau of Reclamation, that is, I think sometimes bent over backwards to make sure that it's following the law properly. One area in which I think there is a shortfall, it's a very gray zone, is housing where the Federal Government is involved, often not dealing with Federal land or directly funding the project, but Federal authority is required and Federal guarantees are involved, and housing is being built inadvertently destroying archeological sites and yet the Federal Government has done, as far as I can see, relatively little to preserve and protect those resources.

Senator **Bingaman**. Then let me just ask Dr. Merlan if he would comment a little more. You say that the inventory of these sites has not been done adequately, and that a great deal more is needed in that respect. Could you estimate the extent of the archeological inventory that we now have? What percent of the archeological sites are presently inventoried, in your view?

Mr. Merlan. I will give a rough estimate for New Mexico, Senator, 5 percent.

Senator Bingaman. When you say not inventoried, you mean that we don't even have accurate records of the locations and these types of things?

Mr. Merlan. That is correct, Senator. I'm saying that we don't even have basic information. Of course, I'm making a guess because we don't know what the site population in New Mexico is. We do know, of course, that it is one of the richest archeological areas in the world. The cost of carrying out such an inventory would be very substantial. I do think, though, that it's less than has sometimes been estimated and that is within our grasp. I think that it might be useful in looking forward to the reauthorization of the Historic Preservation Act in 1987 to consider the idea that while Federal agencies should concentrate on areas of undertakings, areas of actual effect, the States should be asked to form more broad scale inventories and reconnaisances and to provide the necessary background, and the Historic Preservation Act may be interpreted to divide the responsibility somewhat that way.

Senator Bingaman. Thank you very much. That's all I have.

Senator Domenici. Dr. Ware, I heard your testimony about the abundance and the shortage of capacity. Could you tell me now, what are you recommending in that regard or are you just telling us that this is a very, very serious problems?

Dr. Ware. I think we have a serious problem because there's been a neglect of that part of the preservation equation. We have strong statutes. We have large quantities of money being poured into recovering data from the field, and once it gets in from the field, many people consider that the job is done and the job is just beginning. We have a responsibility to preserve archeological and historical data in perpetuity, and that costs money. The museums share a large part of the responsibility because we haven't been collecting the kinds of fees that we need to maintain state-of-the-art repositories. That will change, and I think the Federal Government has to realize that the costs for maintaining large collections for public lands is going to go through the roof.

Senator Domenici. Thank you very much. David Phillips, you mentioned inconsistencies with reference to the various Federal agencies, and then when asked specifically by Senator Bingaman, you mentioned housing in addition to your general statement of various land agencies which have different regulations. On the housing issue, are we talking about housing on the Indian pueblos and the Navajo Nation? Is that what you are referring to?

Dr. Phillips. I'm referring to housing that essentially involves private land, and as I said, this is a gray zone. The Federal Government obviously articulates with housing development efforts in several ways, and there's a question that's never been resolved as to where the Federal Governments responsibility leaves off or where the developers, using Federal assistance, responsibility leaves off with regard to the preservation of antiquities.

Senator Domenici. Are any of the three panelists so far talking about failure on the part of the Federal Government through the Department of HUD, the BIA or otherwise with reference to construction of housing on Indian land? Tom, was that yours or was yours where we are directly involved in putting money into private land? Which is it, or is it both?

Mr. Merlan. Doctor Phillips and I were talking about two different things. I was referring specifically to Indian housing projects which have presented us with preservation problems. Of course, we have also had to deal with the problem of, for example, had FHA loans and approvals, which are made without regard to archeological sites on undeveloped tracts, for example, and that is definitely a serious problem which they don't seem to be taking with cognizance.

Senator Domenici. Well, I want to tell you that I'm personally interested in the issue on Indian land and Indian housing, because it appears to me that if there's one thing we must continue to do, it is to build some houses. It's already taking us from 3 to 10 years to get a few houses built for Indian people on their land, and I don't want it to take 20, but I think whatever length of time it's taking, it ought to be enough time to do what is being suggested here with reference to archeological finds on the lands. So we will try to inquire as to how that is happening because clearly it's taking a long time as everyone knows. We ought to have enough time to do that in between.

Mr. Merlan. May I say, that one of the problems we have been attempting to address just recently is the rehabilitation of housing at Acoma-Sky City. The point there is that the Department of Housing and Urban Development has not been providing oversight of the rehabilitation of the old room blocks. Beams from room blocks have actually been dated back to the 13th century. The point is simply not to provide housing, the point is also to end up with something that people will continue to come from all over the world to see. Tourism is extremely important to the people. It's extremely important to the pueblos, generally, and to other Indian tribes, as well. If the product is distinguished, then it will be a continuing source of income.

Senator Domenici. I thank you very much. Anything further, Jeff?

Senator Bingaman. No.

Senator Domenici. We will excuse the three panelists in the first panel, and let's see if we have our second—is Gilbert Pena here? If not, why don't we just proceed. Navajo Nation, Window Rock, AZ, Anthony Klesert. Would you tell us what you do and what your title is and if you have written testimony, we will make it part of your record and then you can proceed.

STATEMENT OF ANTHONY L. KLESERT, TRIBAL ARCHAEOLOGIST FOR THE NAVAJO NATION

Mr. Klesert. My name is Anthony Klesert. I am the tribal archeologist for the Navajo Nation, and I direct the Navajo Nation Cultural Resource Management Program. I would like to point out two general areas of concern by the Navajo Nation. One revolves around conflicts between the NHPA and the Archeological Resources Protection Act. Essentially, the Historical Preservation Act by omission does not deal directly with Indian Tribes, and we are finding in our situation, at least, that the BIA is supportive of this.

With regards to sacred rights, Navajo sacred rights, the BIA is not strictly required under the Historical Preservation Act to follow Indian directors and so generally speaking, they don't. They seek our advice and they take leave. On public lands, through ARPA, generally speaking, it's the other way around. BLM, for instance, is working with the Navajo Tribe to find out exactly what the Navajo Tribe wants done with sacred sites on public land. What we have here is an interesting situation where the tribal input is receiving more attention off of tribal lands than on.

With regards to tribal sovereignty, the Bureau of Indian Affairs has an essential conflict again between the Historical Preservation Act and ARPA, and they tend to ignore those sections of ARPA that provide special status for Indian tribes on their own lands. In our case, it centers around permits and this sort of thing, but it could easily have bigger implications wherein Indian tribes would be forced to choose between economic development and under the Historical Preservation Act regulation, or sovereignty, under the ARPA regulations, and not be able to have both.

Senator DOMENICI. I don't understand.

Mr. KLESERT. Under the Archeological Resources Protection Act, you are required to have tribal consent before you can do any archeological excavations or removal. So let's say in a situation where an Indian tribe has an area that they consider highly sacred and it is their recommendation or their bottom line that they don't want these things investigated, they would rather have them destroyed than investigated.

Senator DOMENICI. Rather have them destroyed than investigated?

Mr. KLESERT. Sure. On the grounds that privacy and secrecy are essential parts of their sacred value. What it boils down to is that the Historical Preservation Act as strictly read would not allow for the development to go on because there was no inventory and there was no taking into account of the effects of these sites or of the project on these sites, on that area. So conceivably, a project could be canceled because an Indian tribe invoked its sovereign rights to keep the Federal agencies out of that area.

Senator DOMENICI. What are you suggesting we do? Make it such that they can waive it themselves?

Mr. KLESERT. The Advisory Council on Historical Preservation has come up with a proposal to deal with sacred sites and burials and that sort of thing, and I think it's a good start. And it's expressly directed towards the Historical Preservation Act. I think the solution to the basic problem is to emphasize Indian tribal input in the Historical Preservation Act, more than is done at present. I think that's basically the bottom line, and dealing with tribes on a partnership basis rather than as a ward-trustee relationship.

Senator DOMENICI. Did you suggest that language that you just referred to to anyone?

Mr. KLESERT. The Advisory Council on the Historical Preservation Act has a draft sheet of procedures dealing with sacred sites. It's a good beginning. It is in certain ways patronizing and it has its problems, but it's the first we have seen, and it's a reasonably good start.

Senator Domenici. Let me go back to your answer to my question, then, and ask you what you think should be done. You indicated that they, the Navajo Nation, as the example you gave us a minute ago, with reference to the Historical Preservation Act and failure to investigate yielded some kind of a penalty, maybe? You can't proceed with something. What do you recommend with reference to that? Are you recommending that the Historical Preservation Act be changed so that's what might happen? I don't understand what the end product is that you would be looking for.

Mr. Klesert. What I see now is that from a development point of view it would be too easy to cancel the project, let's say a road or reservoir or something like that, because the Federal land manager has not been allowed access to the cultural and archeological sites there, that are there, the sacred sites or the prehistoric sites or whatever.

Senator Domenici. By the Navajos, in this example?

Mr. Klesert. By whatever tribe. This could come as a result of permitting problems or the fact that there are sacred sites involved that the Indian tribes know about and want to keep to themselves. You know, there is any number of ways you could get into this quandary on a hypothetical basis, at least.

Senator Domenici. What about a tribe who has surface control over another Indian people's culture and history? We have that situation, don't we?

Mr. Klesert. Sure That's the case on the Navajo, and again, what we are doing is we are adding layer upon layer of complexity here and, you know, I just see that it breaks down real early on, the system, and with jurisdictional problems like that, it seems to me like what's bound to happen is that the whole system will just stop.

Senator Domenici. You want to complete your statement?

Mr. Klesert. Sure. Thank you. The second major problem is, and you are certain to hear this, lack of funding and the resultant lack of long-term planning because of funding cuts. The situation that exists on the Navajo is that because the BIA is so severely constricted in terms of funding and has so much to do, none of the specific items mentioned in your opening statement are being adequately taken into account, except on a purely reactive, short-term and often temporary and inconsistent basis, and it's because there just isn't any room or capability to go beyond that because of the restrictions problem. I understand the general national problem in terms of funding for this sort of thing. It is in the opinion of the Navajo Tribe, somewhat exacerbated on the Navajo Reservation by a tendency on the part of the BIA to be more concerned with managing paper than with managing the cultural resources of the Navajo Tribe.

In the face of all these rather severe cutbacks and funding restrictions, what we are seeing in our case is that the BIA is fragmenting its organization, becoming less efficient than effective and these fragments become internally strict and conflicting. They tend to create more and more bureaucratic obstacles that they throw up in the way, in the name of archeological compliance. The bottom line is that they are refusing to include the Navajo Tribe as an equal partner, and in our specific case, this is particularly ironic because the tribal program is larger than the BIA program for archeology. It was founded in 1977 and the BIA has only taken the reins of compliance, Federal compliance on the Navajo Reservation in 1982. And we have one of the best, if not the best, Indian tribal cultural resource programs in the entire nation and we are basically—on aspects of importance like this, we are being ignored. We are being treated as a contractor, not as an agency.

Senator DOMENICI. Could you tell us, if you remember, how much the Navajo Nation puts into this? I was going to ask you how much they did and you already said they are doing more than the BIA and have been at it for a longer time. Do you know how much money that is per year, more or less?

Mr. KLESERT. Our program has two funding sources. We get general tribal funds, it's three positions and a vehicle, and for the rest we are on our own. We have set up a revolving account, and by performing archeological work for the Navajo Tribe and the BIA and private contractors to help comply with these various acts, we are able to keep our program afloat. We suffer from a grievious lack of funding, but that doesn't exactly separate us from the run of the mill. The problem that now exist is that we definitely have a subordinate role in terms of policy, compliance, that sort of thing, enacting the kinds of things that need to be done. Our basic role at this point is grinding out the field work and that sort of thing. We have made the attempt to establish more of a partnership, and have generally been rebuffed. I don't know if that answers your question.

Senator DOMENICI. Yes.

Mr. KLESERT. I do have some solutions, some possible solutions, for your consideration. The first, of course, is more funding. I recognize the inherent problems in that and I would like to plead the case for at least no more cuts. Whatever you can do we would be very appreciative. What follows from that is a need for more long-term planning. What we need desperately, is effective programs to deal with the individual issues that this hearing is meant to address. We need a project or we need a program, particularly an oriented program, not a project oriented program which is what we have now, and again, it needs to involve the Navajo Tribe. I think what we are talking about here is especially something that is custom made to involve the Indian tribes directly. It's their resources.

Third would be legislative changes to protect sacred sites and acknowledge tribal sovereignty. I think this particularly needs to be beefed up in the Historic Preservation Act and that the conflicts that I have mentioned between the Historic Preservation Act and ARPA need to be ironed out and protected so that problems don't occur that are insolvable.

Finally, what the Navajo Nation would like to offer as a possible solution to this problem with special reference to our own case, is a solution under Public Law 93-638, the American Indian Self-Determination Act. We would propose that it is feasible to wrap all these together and in a package that would solve them, wherein the tribal program would take over the Federal functions as opposed to the Federal responsibility and authority. We would take over the

Federal functions for archeology. It would be applied under the applicable Federal laws.

We see this as a solution, but consolidated and streamlined under one roof, all the archeological programs on the Navajo Reservation would establish an effective and long-term program of protection and enforcement which currently does not exist. It would allow for the establishment of an automated and accessible data base which does not now exist. It would provide a much more streamlined and responsible review process. The nuts and bolts would run much more smoothly, and by definition, it would directly involve the Navajo Tribe and the management of its own archeological resources. Thank you very much.

[The prepared statement of Mr. Klesert follows:]

TESTIMONY OF THE NAVAJO NATION
on the
Oversight Hearing Concerning
The Effectiveness of Land Managing Agencies
Charged to Manage, Protect and Preserve Cultural Resources

before the
Public Lands, Reserved Water and Resource Conservation Subcommittee
of the U.S. Senate Committee on Energy and Natural Resources

October 14, 1985
Albuquerque, New Mexico

Members of the Committee, my name is Anthony L. Klesert. I am the Tribal Archaeologist for the Navajo Nation and I direct the Navajo Nation Cultural Resource Management Program (NNCRMP). I want to take the opportunity on behalf of the Navajo Nation to thank you for inviting us to testify before this Subcommittee concerning these issues.

The major agency involved is the Bureau of Indian Affairs - Navajo Area Office (BIA-NAO), although we do interact with other agencies as well. This testimony is presented in the sequence suggested in your invitation to Peterson Zah, Chairman of the Navajo Tribal Council.

PROBLEMS

Protection: Protection of archaeological resources (under ARPA and NHPA), paleontological resources (under the 1906 Antiquities Act) and Navajo sacred places (under AIRFA) is basically inadequate and undirected on the part of BIA. BIA is continually in a reactive mode, guided by short term limitations and goals rather than by any semblance of long term strategies; they deal on a project level, rather than programmatically. In many instances they over-react on the basis of limited information. For instance, BIA did everything short of closing down the mine when they heard of "dinosaur bones" found on the McKinley Mine, and eventually came out with an extreme set of procedures for dealing with such instances. Subsequently, the NPS in Washington has considered those procedures to be essentially illegal, and the "bones" turned out to be tree roots.

Regarding sacred sites, we have a system in effect, an artifact of federal laws, which stresses tribal involvement off reservation more than our input on the reservation. On BIA-administered lands, BIA takes the lead and is not, by statute, required to consult with us regarding approppriate protection of sacred sites; BLM (etc), however, is required to consult with us (under ARPA) regarding sacred sites on public land. As a result, while BLM and others have actively sought our input, BIA-NAO has unilaterally begun issuing directives and instructions to archaeological groups, including NNCRMP, the Tribal governmental program. BIA-NAO has also implied that sacred sites not universally recognized by most Navajo as sacred need not be protected with the same diligence as other, more prominent sacred places (ones in their files).

Clearly what is lacking with regard to sacred and important places is directives in NHPA (or its implementing regulations) requiring the input of the Indian land owner, and requiring the federal government to abide by their wishes regarding sacred sites and places. AIRFA is so vaguelly worded, and lacks any implementing regulations, that it is of no assistance in the matter. Recent changes to NHPA proposed by the Advisory Council are a step in the right direction, although they are certainly not perfect and tend to be patronizing in their approach (not having had any Indian input).

BIA-NAO has consistently ignored tribal sovereign rights and exclusions under ARPA and has mercilessly harrassed the tribal archaeology program (NNCRMP) for not abiding by ARPA restrictions or maintaining ARPA permits for activities such as collections of samples of artifacts off sites owned by the Navajo Nation. The BIA has gone so far as to suggest that we are violating the law in such instances. This ignores a DOI solicitor's opinion to the effect that NNCRMP needs no ARPA permit (nor any non-ARPA "use authorization") and need not satisfy ARPA "permit requirements" on tribal lands. The net result of this approach by BIA has been a severe constraint on the tribal program's ability to carry out its mission under Tribal Code, to protect tribal cultural resources.

The root of this problem, aside from NAO rigidity, is that the NHPA and ARPA are in conflict with regards to Indian tribal sovereignty. While ARPA grants tribes certain rights towards their own resources and allows for tribal exemptions from federal control, the NHPA does not. For instance, under ARPA, tribal governments are excluded from the necessity of federal permits for excavation of archaeological sites; but BIA-NAO's reading of NHPA has led to the requirement that the Navajo Nation maintain a permit for non-excavation, or simple inventory of its own lands. More serious conflicts are easy to imagine, wherein Indian Tribes could be forced to choose between their sovereign rights (expressed and protected under ARPA) or economic development (as regulated under NHPA).

Access: In terms of access to BIA site records and project files, again there is a problem, and again it relates to both funding limits and BIA-NAO obstinance. Their files are in poor shape and are for the most part accessible only with great diligence and a considerable time investment (ours are in the same terrible shape). This is due to lack of funds as well as a lack of purpose: no long term plan for establishing an automated or accessible file system exists. This is exacerbated by BIA attitudes. For a time this year, BIA actually refused to allow access to their project files, by even tribal archaeological staff, without a formal Freedom of Information waiver request, signed by the Chairman and approved by the BIA Area Director. Naturally, the tribe's ability to perform necessary file searches suffered as a result. They have since desisted in this requirement, but there still exists no truly accessible archaeological file for the reservation.

Curation: There is no decent on-reservation system for projected long term curation needs, either for the BIA-NAO or for the tribe. This has been a persistent problem for years, and is once again due to a complete lack of funding. Curation is expensive and requires a lot of space, and BIA cannot spare money or facilities. We make do with the Navajo Tribal Museum, a small facility, and others must find curation facilities elsewhere. It is important to note that the only exception to this is the BIA: their field units, making collections and performing excavations, have no curatorial facilities or arrangements, despite Tribal requests that some be found.

Enforcement: This I see as the follow-up to "protection" when protection fails (as it often does). BIA-NAO is utterly useless when it comes to enforcement. Their Special Agents assigned to the reservation simply have "other priorities" and have never assisted in any enforcement effort. The BIA-NAO has never been responsible for any indictments under ARPA, while the Navajo Nation (with valuable aid from the FBI) is responsible for two felony convictions (still woefully inadequate considering the amount of depredation which takes place on the reservation. Currently, Tribal Court in Shiprock is pursuing a case involving a violation of Tribal Antiquities Law. Yet again, I see this as directly attributable to insufficient funds and a lack of long term direction on the part of BIA-NAO.

Management: BIA-NAO's management of archaeological and historic properties under the National Historic Preservation Act is in disarray and is unresponsive to tribal needs or the general context of archaeological and historic preservation on Indian lands. Their review program (EQS) is disasterously underfunded and understaffed, and again suffers from a purely reactive, project-level mode of operations, with no long term plan of operations beyond grinding out X-number of review documents. This state of affairs is further impeded by a peculiar mind-set on the part of EQS, a "bunker mentality" to the effect that they have the only legitimate view or approach towards "proper" NHPA compliance: in their case, a literal and particularly unyielding reading of the statutes, with no room for variation or contextual creativity (which the regulations do encourage), and certainly no allowance for tribal views per se.

Project reviews routinely take 6-12 weeks, and longer, and usually involve review at a myopic detail (grammar, punctuation, typos such as "Pelycepod" instead of "Pelecypod") completely at odds with the level of effect or scale or a project, and without concern for the effects of resultant long term, often interminable delays on the Navajo Nation or applicants. Rather than place an effort on streamlining this unresponsive process, BIA-NAO instead choses invariably to add additional layers of requirements, in the form of stringent "notification" requirements, detailed file search demands (but see "Access" above), and poorly defined, ad hoc "research" concerns. The waters are even further muddied by BIA's tendency to reverse or deny directives (they have stated in writing that their "instructions" to contractors are merely "guidance" and can therefore be rescinded later).

The BIA-NAO program is greatly fragmented, into no less than four archaeological program for Navajo, resulting in signficantly decreased efficiency and consistency of approach. This greatly exacerbates the problem of lack of direction and planning, and has a distinctly deleterious effect on development projects attempting to abide by BIA "standards."

In essence, BIA-NAO is more concerned with managing paper than with managing the Navajo Nation's cultural resources. So long as the paper files are exact and complete and consistent, they are satisfied; regardless of the costs of making every detail match and despite the fact that such adherence often is contrary to the interests of the Navajo Nation.

Finally, BIA-NAO has, over the past few years, categorically refused to allow the Navajo Nation any meaningful role in the management of its own cultural resources. Despite constant attempts on our part, BIA-NAO has consistently maintained that the law prohibits any such consultation or partnership, and that (and this is indicative of their failure to grasp the situation) the tribe could set up its own counterpart management system, thus forcing everyone to be subject to two review processes. This needless approach is a shame, because in those instances where cooperation is sought and attained (for example, the Chaco IMG: involving the Navajo Nation, BIA, NPS, Forest Service, BLM and New Mexico), the process is immensely improved and becomes much more responsive.

To summarize, the problems which now exist seem largely to revolve around a lack of adequate funding and the absense of any responsible long term planning or direction. Certain inadequacies in historic preservation law have also been noted, which cause conflict between BIA-NAO's perceived purpose and Navajo sovereign rights. These are aggravated by a consistent arrogance towards the Navajo Nation, its legitimate interests and its professional programs (the Tribal NNCRMP was established in 1977 by Tribal Code, while BIA-NAO took over compliance from NPS on our reservation only in 1982).

SOLUTIONS

1. Funding: Clearly, this is the major priority, but just as clearly, given the current funding situation in Washington, we fear that funding may continue to be cut. Due to the great importance of this issue, we ask the Subcommittee to recommend that funding levels be increased, or at least that current levels be maintained.

2. Long-term planning: There is a clear need for the existence of major long term programmatic goals on the part of BIA. However, so long as funding is so drastically limited, they will probably have no choice but to remain project oriented, reactive and short sighted. While they could also begin to actively and meaningfully include the Navajo Nation in their activities, their past record suggests rather forcefully that BIA-NAO is not capable of this.

3. Legislative changes: It is essential that the NHPA be amended to require Indian land owner input in situations regarding sacred sites. Judging by the recent effort by the Advisory Council on Historic Preservation, this appears to be underway, and we would greatly

encourage the adoption of any such proposed changes, so long as they genuinely include Indian desires and concerns. The more general conflicts between NHPA and ARPA must also be addressed and resolved, so that economic development and tribal sovereignty do not become mutually exclusive ambitions.

4. 638 contracting: The Navajo Nation wishes to suggest that a comprehensive package for a P.L. 93-638 contract application of all BIA-NAO archaeological functions and programs might be a feasible solution to the problems expressed above. This would function under the guidelines of federal law and regulation, and would accomplish several critical objectives. First and foremost it would streamline and consolidate the historic preservation program for the Navajo reservation, making it more efficient, cost-effective and responsive. It would allow for the establishment of a protection and enforcement task force, with long term program plans and strategies. It could also (with the help of other grant monies) enable the establishment of an automated and accessible data file for archaeological sites and projects, reservation-wide. It would allow for more manpower in the review process, which would allow for more timely and straightforward project reviews. And finally, by definition, it would involve the Navajo Nation directly in all aspects of management of its own archaeological and historic/sacred resources.

Senator **Domenici**. Thank you.

Senator Bingaman.

Senator **Bingaman**. Your testimony has largely pointed out that there are jurisdictional problems and lack of funding problems and all that. With regard to the laws of some of these sites and the laws of some of these artifacts, do you think that that's become a much more serious issue? Is it sort of business as usual as it was 5 years ago? I mean, I have related reports of a much greater and much more organized effort to exploit, loot, vandalize these sites than existed 5 years ago. Are you in a position to tell us whether those reports are accurate or whether this is just a continuing problem that we have always had and will keep having?

Mr. **Klesert**. It's entirely accurate. As opposed to several years ago when most of the archeological resources on the Navajo Reservation were basically pristine, most areas of, geographically speaking, of the reservation have been untouched by pot hunters, and you could just look at a map of the main highways. The main border towns, Gallup, Farmington, Blanding, places like that and that's where the pot hunting has taken place. Anymore, with increased development on the reservation, more paved roads, we are seeing greater and greater degradation taking place all over the reservation. They are moving in. Now you can go around to all the coal mine areas and draw a big circle around them and that's where pot hunting has taken place. As the towns on the reservation get larger and have more influx of non-Indians, you see the same thing.

A second phenomenon that's starting to take place is the Navajo Indians are taking part in the pot hunting on the reservation, and this is a particularly disturbing new aspect the last few years, and I don't really know if it's because they are being encouraged to do this by non-Indians off the reservation that will give them a deal for whole pots or what, but there is a case in tribal court right now of dealing with pot hunting in the Tesuque area.

Senator **Bingaman**. When you encounter this kind of activity taking place, what kind of enforcement capability do you have at your disposal or does the tribe have to deal with the situation?

Mr. **Klesert**. Not a lot. At this point, generally what happens is the BIA and the Navajo Tribe get involved when we first hear about it. The problem, to back up a step, is that there is no program of protection, per se, to try to prevent violations. You know, in terms of education or what have you, so we are in a reactive mode as with most things. And what generally takes place is that the tribe and the BIA send representatives out to record the sites, record the amount of damage, tribal police get involved. The tribal rangers are always involved with this sort of thing, and at least historically, I don't know if there are any systematic implications but the BIA enforcement branch generally falls down on the job and has not been of much help past that point in terms of enforcement after the fact in pursuing these things in court.

Senator **Bingaman**. Are there any examples you can cite for us of successful prosecution of people for this looting or vandalism of these sites?

Mr. **Klesert**. There has only been one case so far under ARPA and that was in 1983. An archeological site near Indian Wells, north of Holbrook was potted and the BIA gal and myself went out and recorded the site. I wrote up a report and submitted it to the FBI in Flagstaff, and from there, it was pursued. They made some arrests. The tribal rangers had caught people in the act, and it was pursued in court in Phoenix and felony convictions resulted. That's the only case on the reservation under ARPA, and it involved the Navajo Tribe. In terms of enforcement, it involved the Navajo Tribe and the FBI.

Senator BINGAMAN. Let me just ask one more question. You said in your testimony that you think we needed—I think you said a program-oriented program instead of a project-oriented program. Was that the phrase you used?

Mr. KLESERT. Yes, sir.

Senator BINGAMAN. Could you just elaborate a little bit as to what you are talking about?

Mr. KLESERT. I think what we need is something beyond the current approach, which is we have a limited number of people assigned multiple jobs with basic review, nuts and bolts compliance under the Historic Preservation Act. Whenever something like this comes up, it's unusual and people are assigned off of their normal duties and go out and as best they can, given their time constraints, deal with the problem on a case-by-case basis. I think what would be nice to have is some sort of small set of individuals whose primary function was dealing with prevention and enforcement under ARPA. I think that's basically the only way you are going to be able to reduce the problem. Somehow align things with tribal rangers who make routine investigations traveling around, checking out known sites of really high profile. That sort of thing. That doesn't exist at this point.

Senator BINGAMAN. Thank you very much.

Senator DOMENICI. Thank you, Senator Bingaman. Let me just ask you this now. As I recall, in this law we passed, the Archeological Resource Protection Act, we found enormous looting and we had pictures of it and very extensive hearings, and we were rather deferential on the Indian people in terms of making the acts legal and the permitting system was deferential to them. Is that not correct?

Mr. KLESERT. Yes, sir.

Senator DOMENICI. On Indian land. Now, you are not suggesting that we in any way change that even if the Navajo Nation and others do not have enough resources currently for the permitting. You want the deferential treatment toward them in terms of this exercise of power? We don't have enough money to do their job, they don't have enough money to do their job, but nonetheless, we want to make sure to continue with the Indian people having the say-so with reference to what's legal and illegal, is that correct?

Mr. KLESERT. Yes. I don't see that as requiring an awful lot of resources.

Senator DOMENICI. Is there anything about the enforcement provisions in the law that I just cited that needs changing or is it that changes are needed overall with our not providing enough resources?

Mr. KLESERT. I think that's the problem. Overall, not enough effort is being made to allow those provisions to be carried out and at the same time, on occasion the Historic Preservation Act tends to get in the way because of the conflict between those two laws in that the Historical Preservation Act does not expressly allow for direct Indian input on their land.

Senator Domenici. Thank you very much. Thanks for coming to Albuquerque today. It's about 10:05 and it seems to me we are moving along at a pretty good pace. If the Federal managers don't mind, can we go one more panel before we put you on? I think it's helpful to all of us to hear these people first and then put you on if you don't mind. Jeff, is that satisfactory with you?

Senator Bingaman. Yes.

Senator Domenici. I gather we are at panel number four. Could we have panel No. 4 take the witness table here and Dr. James Judge, Ranchos de Taos, Jerry Brody, University of New Mexico, Dr. Spencer Lucas, Department of Geology, UNM, Raymond Thompson, Arizona State Museum, University of Arizona, and Doctor Garth Bawden, director of the Maxwell Museum of Anthropology, Albuquerque.

I would ask any of the three panelists who are present at the witness table—we indicated that the hearings would start at 9 o'clock. Were any of you under the impression that it would be later than that? I'm wondering if you all assumed it would be any time after 9. Is that a fair statement of how you were advised? We will try to accommodate the two who are not here. I would suspect by this hour they are not going to arrive. Could each of you proceed 3 minutes and we will put your statement in the record. If you'll please identify yourself for the record and tell the subcommittee what your title and role are. Why don't we start.

STATEMENT OF DR. GARTH BAWDEN, DIRECTOR, MAXWELL MUSEUM, UNIVERSITY OF NEW MEXICO

Dr. Bawden. I'm the director of the Maxwell Museum, University of New Mexico.

Senator Domenici. Doctor, would you get that mike up just slightly and then proceed.

Dr. Bawden. As a director of the university museum, I am very involved in the curation of cultural artifacts derived from federally subsidized archeological projects conducted by the University of New Mexico, office of contract archeology. I have much interest, of course, in the problems of curation and storage and followup use of these artifacts. These problems are even more pertinent in the fact that the Maxwell Museum also acts as the repository for the national park service collection, generated by the Chaco Canyon project over the years.

In general, my concerns as a museum director are directly caused by what are discerned, certainly in the past, as a general lack of interest by the appropriate agencies and what happens to their collections following the completion of specific projects, and we have had some mention of this in the earlier panel. I will be following up on some of this this morning. We, as the museums of curation here, are left with responsibilities of collections' maintenance that can be summarized under several categories. Generally recording, accessing, and cataloging, which is one broad category.

Conservation is extremely important. Storage, mundane but vital, and ongoing accessibility of collections and I would follow up on that a little as well. All of these duties are expensive and time consuming, involving the efforts of a range of museum professionals and much academic expertise.

In fact, given the recent influx of material in this part of the country with its rich resources and ongoing projects, it is not, I think exaggerating the point to suggest that in order to satisfactorily curate privately owned collections the requisite museum staff would be occupied for the greater part of their time in those efforts, given the usual short supply of such trained individuals.

Even going a little further, even the regular museum staffs are not adequate for good accession and conservation and we know they are not. We still have a growing major problem of storage. Most museums—and this is certainly the case with my own—were not established with the view of serving this type of need. The result generally is that archeological collections are being housed in spacially inadequate facilities which lack even adequate requirements. The particular problem is the lack of study space and archival space for all field notes. Lab analysis records and followup documentation can be filed in close proximity to the collections, thus maintaining the integrity of these collections. This lack of adequate space, in fact, means that many important collections deteriorate, become inaccessible for further study.

I should just add, as an aside, that in a developing scientific field like archeology such additional research often leads to archeological and strategic improvements that can cut the cost of further projects. At this dramatic level, as well as one of responsibility for natural resources, alleviation of the problem is very beneficial.

In conclusion, I should just like to suggest very generally one of two ways for improving the situation. Museums do have resources and professionals in place to generally oversee and conduct curation, maybe they are inadequate, but they are accessible as we as museum directors are very willing to devote the time to these professionals to do this kind of work.

However, we need to supplement these in-place personnel resources with additional staff, funded, I think, by project grants. Likewise, museums subsidized by State or university funds, such as my own, do have some capacity to share, to some extent, in the financial and developmental responsibilities of expanded space for repositories. To some extent, this is a mission of the directors to sell this duty as an important function of the university and the fact that it is and can be done. However, I think that such collaborations must be formalized between the institution and the government, supported by clear realization of federally funded projects. Guidelines should also include monetary provisions for the ongoing preservation of what are, in fact, part of the cultural and scientific heritage of this country.

Senator Domenici. Thank you very much. Dr. Lucas, would you proceed?

STATEMENT OF DR. SPENCER G. LUCAS, CURATOR OF GEOLOGY, UNIVERSITY OF NEW MEXICO

Dr. LUCAS. My name is Dr. Spencer Lucas. I'm the curator of geology at the University of New Mexico, and I am a bird paleontologist. I only really want to make two points today. The first one, I think it clearly needs to be made here is that paleontology and archeology are not the same thing. I think this point has been made for a number of years, but if the Federal Government will realize that, I think it can make great advances in dealing with paleontology on Federal lands. What flows from that realization is that paleontologists and archeologists, have been trained differently. And to manage paleontology within the context of archeological programs is not satisfactory to myself and I don't think any paleontologist.

My second point concerns the management of paleontology by the Federal Government. The failure to realize the difference between paleontology and archeology is evident when looking at different Federal agencies. For example, I am quite certain that the word paleontology is not in the vocabulary of the U.S. Forest Service. It is only barely in the vocabulary of the Bureau of Indian Affairs and barely in the vocabulary of the Bureau of Land Management. I want to focus on the Bureau of Land Management to regulate paleontology. I have been involved with BLM's efforts to manage paleontological fossils for 9 years.

It is my conclusion that BLM's attempts to regulate fossils have obstructed the collecting efforts of professional paleontologists while not obstructing those of the amateur fossil collector and vandal. BLM requires from the professional paleontologist what I deem to be unnecessary paperwork. It often creates long delays and enforces silly procedures. For example, accessing the environmental impacts of driving a jeep on a dirt road in an area denuded for miles of vegetation. It enforces these procedures prior to issuing such collecting permits.

On the other hand, BLM is incapable of preventing the amateur collector, the vandal or other member of the general public whose activities more often than not destroy valuable scientific information, from collecting fossils. These people make no effort to obtain permits and have in no way been penalized for their violations of BLM's regulations. In contrast, professional paleontologists like myself are forced to deal with the cumbersome bureaucracy before we are permitted to carry out our scientific research. The result is that those people who should collect fossils, qualified professional paleontologists, are those whose efforts are most being hampered by the BLM.

To conclude this, I think it's clear that Federal policy regarding paleontology either has to go one of two ways. Either the Federal Government should in no way attempt to regulate paleontology—certainly I believe not through the Bureau of Land Management—or it must develop clear legislation relating to paleontology independent of archeology and must realize that paleontology and its problems are different from those of archeology and then proceed to regulate paleontology on that basis. Thank you.

[The prepared statement of Dr. Lucas follows:]

U.S. BUREAU OF LAND MANAGEMENT AND THE MANAGEMENT OF PALEONTOLOGICAL RESOURCES

Presented to the United States Senate Committee on Energy and Natural Resources, Albuquerque, New Mexico, 14 October 1985, by Dr. Spencer G. Lucas, Curator of Geology, University of New Mexico, Albuquerque, New Mexico 87131

As a professional vertebrate paleontologist, I have been involved with BLM's efforts to manage paleontological resources for nine years. The result of this involvement is extreme dissatisfaction with BLM's endeavors. The reasons for my dissatisfaction are as follows:

1. BLM attempts to regulate fossil collecting are obstructing the collecting efforts of professional paleontologists while not in any way obstructing those of the amateur fossil collector and vandal. BLM requires of professional paleontologists unnecessary paperwork, often creates long delays and enforces silly procedures (such as assessing the environmental impacts of driving a jeep on a dirt road in an area denuded for miles of essentially all vegetation) prior to issuing such permits. On the other hand, BLM is incapable of preventing the amateur collector, the vandal or other member of the general public whose activities more often than not destroy valuable scientific information, from collecting fossils. These people make no effort to obtain permits and are in no way penalized for there "violations" of BLM regulations. In contrast, professional paleontologists like myself are forced to deal with a cumbersome bureaucracy before we are permitted to carry out our scientific research. The result is that those people who should collect fossils - qualified professional paleontologists - are those whose efforts are being most hampered by the BLM.

2. BLM has failed to hire or train credible management personnel with sufficient expertise in paleontology to make informed and reasonable management

decisions regarding paleontology. In New Mexico, BLM's "paleontology program" continues to be funded in a "catch-as-catch-can" manner resulting in a lack of sufficient funding each fiscal year and marked uncertainty about the scope of next fiscal year's level of financial support. Time and time again I have recommended to BLM personnel specific management procedures regarding paleontology on federal lands in New Mexico, only to be met with the answer "good idea, but we haven't got the money to support it." Since BLM lacks sufficient funding to manage paleontological resources effectively, and since it also lacks qualified personnel to do so, it is logical to ask why should BLM even manage paleontology at all?

3. My experience with BLM suggests to me that it is an inefficiently run and poorly conceived branch of the Federal Government. With few exceptions it has been unclear to me what expertise so-called "resource specialists" and land "managers" in the BLM possess. Certainly most of these people know nothing about paleontology, and many of them don't even have a passing familiarity with the federal lands that I have collected fossils from. This makes it very frustrating to a professional paleontologist who has to deal with these people in order to carry out the collecting of fossils that is the very lifeblood of his career.

To conclude, I would like to urge the members of this committee to see that all regulation of paleontology on federal lands be removed from the jurisdiction of the BLM. It is my strong feeling that no regulation of paleontology on federal lands is better than the selective regulation that BLM now carries out.

Senator **Domenici**. Thank you very much. We will proceed with Dr. Thompson, Arizona State Museum, University of Arizona and then we will have the other witnesses.

STATEMENT OF DR. RAYMOND H. THOMPSON, DIRECTOR, ARIZONA STATE MUSEUM, UNIVERSITY OF ARIZONA

Dr. **Thompson**. My name is Raymond H. Thompson. I'm director of the Arizona State Museum at the University of Arizona. I'm here to present to you some concerns about the curation of archeological collections derived from Federal lands. I represent the 5,000 members of the Society for American Archeology, the more than 5,000 members of the American Association of Museums and the 100 members of the Association of Science and Museum Directors.

The plain fact of the matter is, museums and other repositories are being swamped by the volume of material from Federal archeological projects. In the period following World War II, most of the Federal funded projects were grossly underfunded salvage projects, and the collections of artifacts and information that they produced were very small. The situation in those simple days has changed dramatically during the past quarter century as a result of the continued interest of the many Members of the dedicated Congress.

Our national body of legislation has enacted archeological protections that are the envy of other countries. This legislation has led to an incredible increase in archeological survey and excavation and an enormous quantity of archeological material. Three other changes are also responsible for the great flood of collections. One, the development of sophisticated procedures have made it possible for archeologists to do a better job of reconstructing prehistory from the fragmentary record of the past, but they have also contributed significantly to the volume of material saved for study.

Two, because of past and present destruction, in many parts of the country, the only archeological material that will be available to future generations will be the collections we decide to save today. And three, there is the growing public awareness of the conservation needs of museums and the knowledge that specimens not adequately cared for and properly stored deteriorate rapidly.

As evidence of the increase in the collections, let me cite the experience of the museum—of the Arizona State Museum. In the decade from 1975 through 1984, we accessioned 171 percent greater volume of boxed collections than in the comparable period from 1965 through 1974. In 1984 alone, we accessioned 988 cubic feet of collections, a volume 178 percent greater than that received in the preceding year and 279 percent greater than in 1980. These figures document a volume of archeological collections that is beyond the capacity of a single state institution.

There is the further question of how much of its own resources any State can afford to spend on the care of federally owned collections. The need for curation was first recognized, as Senator Domenici has mentioned, in the Archeological Resource Protection Act of 1979. As a result of the 1980 amendments to the National Historical Preservation Act, draft regulations for curation and federally owned archeological collections are currently under review. There are also some procedures for project funding of initial costs of curation. But laudable though these efforts are, they do not represent an adequate Federal response to the larger problem of long-term curation as a number of speakers have mentioned.

Perhaps what is needed is a new charter for the Federal-State partnership, a charter that will identify innovative and creative ways that existing mechanisms may employ expanded resources to bear on the curation problem.

The central Arizona project of the Bureau of Reclamation provides an example. Extensive excavation projects to mitigate the impact of this construction have produced collections so large that no museum in Arizona could handle them without substantial assistance. Yet all agree that these valuable collections should stay in Arizona and be curated in one place. This seemingly impossible situation has stimulated a unique example of Federal-State cooperation involving the Bureau of Reclamation, the National Park Service and the University of Arizona.

This cooperative effort is the result of creative use of mechanisms already available to the Federal agencies, and does not require a request for any new legislative authority.

We hope that this and other examples may serve as models for other cooperative ventures in the curation and management of federally owned collections. It is possible that some agencies will be timid about innovative actions without an explicit congressional mandate. It is possible that some agencies will be unable to act, despite their creativity because of the lack of funds or the lack of budgetary authority. It is possible, as some have mentioned, that some agencies will not be able to carry out their curatorial responsibilities, despite their creative desires and despite the intent of Congress because of policies and actions within the executive branch.

Mr. Chairman, the archeological and museum communities of this country urge that this committee translate into action its concerns about the Nation's archeological heritage. Action that will make the Federal responsibility to curate federally owned archeological collections no less mandatory than the responsibility to recover them in the first place. Action that will encourage new and creative forms of cooperation between the Federal agencies and State and private organization, and action that will provide needed Federal assistance to the State and private partners able and willing to help solve the increasingly serious curation problem.

[The prepared statement of Dr. Thompson follows:]

Comments of Dr. Raymond H. Thompson, Representative of
the Society for American Archaeology, the American Association
of Museums, and the Association of Science Museum Directors,
at an oversight hearing of the Subcommittee on Public Lands,
Reserved Water and Resource Conservation of the Committee
on Energy and Natural Resources of the U.S. Senate,
held in Albuquerque, New Mexico, October 14, 1985

Mr. Chairman, my name is Raymond H. Thompson. I am Director of the Arizona State Museum and Fred A. Riecker Distinguished Professor of Anthropology at the University of Arizona in Tucson, Arizona. I am here to present to you some concerns about the curation of archaeological collections derived from federal lands. For this purpose, I represent the more than 5,000 professional and avocational members of the major national organization of archaeologists interested in the prehistory of this hemisphere, the Society for American Archaeology; the more than 7,200 individual and almost 2,000 institutional members of the largest museum organization in the world, the American Association of Museums; and the 100 members of the Association of Science Museum Directors who direct the major anthropological, natural history, and science museums primarily involved in the curation of archaeological collections generated by federal programs and compliance activities.

The plain fact is that museums and other repositories are being swamped by the volume of material they are receiving from federal archaeological projects. The nature of this crisis can be seen very clearly by contrasting the situation during the 1950s with the conditions of the past decade.

In the period following World War II there was relatively little archaeological work that was caused by federal government actions except for the River Basin Surveys. The national level of concern for the protection of the nation's archaeological heritage was low. The few projects that were carried out were done under special cooperative programs that were models of the federal-state partnership. Most of the federally-funded projects were sponsored by the National Park Service in important sites that were threatened with immediate destruction. These essentially salvage projects were all grossly underfunded, but state universities and museums, as well as some private institutions, carried out the necessary work anyway, because of their conern for the recovery and preservation of the knowledge contained in the threatened archaeological sites. Often they committed more of their own limited resources to the effort than the federal resources the National Park Service was able to allocate to the project.

The collections of artifacts and information that resulted from these projects were small and the local institutions incorporated them into their holdings at no cost to the federal agencies. A single institution might be involved in one or two small-to-medium sized projects in one year. The processing of a dozen cartons of specimens did not put a serious strain on the institution's resources. Moreover, if the collection was too large to handle, it was common practice to cull the collection and save only the better preserved, more spectacular, and diagnostic specimens.

The situation of those simple days has changed dramatically during the past quarter century. As a result of the continued interest of many dedicated members of both houses of the Congress from all regions of the country and from both political parties, our nation enjoys a body of legislation on archaeological protection and historic preservation that is the envy of other developed countries. These laws protect the nation's heritage and patrimony, provide reasonable procedures for identifying and recovering the information contained in archaeological sites threatened by federal actions, and fund generally adequate data recovery activities to mitigate the impact of those actions. The two most serious matters not covered adequately in existing law are the protection of historic shipwrecks, for which bills are now pending, and the curation of the large quantities of archaeological materials resulting from the greatly increased level of archaeological activity stimulated by national policy.

The development of this legislation led to an incredible increase in archaeological survey and excavation as the various federal agencies called upon the archaeological profession to help them meet the new requirements of the law. This activity, in turn, has produced an enormous quantity of archaeological material that the nation's museums must find a way to curate.

However, it is not only the federally stimulated increase in archaeological excavations that is responsible for the great flood of collections. Changes in the archaeological and other sciences have resulted in great improvements in interpretive capability.

Archaeologists experience both the frustration and the challenge of trying to reconstruct the past from the very scrappy and fragmentary remains that survive centuries of exposure, erosion, and destruction. Efforts to maximize the interpretive value of archaeological evidence have led to the development of sophisticated new statistical procedures, computer-assisted analysis, and elegant laboratory techniques that often require large samples not only of artifacts, but the waste products of artifact manufacture and many different kinds of soil residues. We can no longer reduce collections by culling as we previously did. In fact, we must now preserve more. These new procedures have made it possible for archaeologists to do a much better job of reconstructing prehistory from the fragmentary record of the past, but they have also contributed significantly to the volume of material saved for study.

Another factor that influences the tendency to preserve large collections of archaeological material is the widespread realization that for many parts of the country, the only archaeological material that will be available to future generations will be the collections that we decide to preserve today. Previous and current destruction of archaeological remains by urban expansion, industrial activity, agricultural leveling, mining, and other land modification actions are rapidly depriving us of any evidence of much of our past heritage. Inasmuch as archaeological resources are non-renewable, unless we save what we are recovering today in the federal programs, we will be seriously short changing future students of the past.

A third factor that leads to the amassing of larger and better documented collections is the growing public awareness of the conservation needs of museums. Specimens that are not adequately cared for and properly stored deteriorate rapidly, making the initial effort at preservation a futile one. This public concern has been heard by the Congress which mandated the Institute of Museum Services to conduct a major survey of the size and condition of the collections entrusted to the custody of the nation's museums, the results of which have just been published. The National Endowment for the Humanities funded a study by the American Association of Museums of collections care in anthropology, art, and history museums in which I participated. The publication of the results of that study have already had a beneficial impact on collections management practices. These concerns have influenced archaeological collection policies, so that today we save more data, document them better, and take better care of them, thereby learning more about the past and serving more adequately the needs of the public in the future.

Let me illustrate the dramatic changes that have taken place in the past 25 years by citing some statistics from the Arizona State Museum which I believe are reasonably representative of conditions generally throughout the country. Our circumstance is certainly typical for western states where much of the land is owned or controlled by the federal government. The Arizona State Museum has enjoyed a close working relationship with many federal agencies for more than 50 years, a situation that is fully descriptive of the federal efforts in Arizona today.

In the decade from 1975 through 1984, we accessioned 171% greater volume of boxed collections than in the comparable period from 1965 through 1974. If we look only at the past 10 years, we find that in the five years from 1980 through 1984, we accessioned a volume of boxed archaeological specimens 456% greater than the volume accessioned in the first five years. In 1984 alone we accessioned 988 cubic feet of collections, representing a volume 178% greater than that received in 1983, and 279% greater than that received in 1980. Inasmuch as we usually do not receive the collections for curation until three or four years after the completion of a project, we expect that the high level of archaeological excavations during the past few years will result in an even greater increase in the accessioning of collections in the next five year period.

These figures document the inward flow of a volume of archaeological collections that is beyond the capacity of a single state institution to handle. Even though we and other museums have developed new, efficient, computer-assisted methods for handling colletions, we are unable to provide adequate curation for the enormous quantity of materials offered to us. There is the further question of how much of its own resources the State of Arizona, or any state, can afford to spend on the care of federally-owned collections. Some attention has been given to this problem. It is now common practice to charge the cost of receiving and accessioning a collection to the project that generates the collection. There is at present, however, no mechanism for adressing the long-term curation of the specimens. Since the collections are usually delivered to the museum or repository long after the termination of the project and its budget, there are clear limits as to how much of the cost of curation we can expect the individual projects to cover.

The need for curation was first recognized by the Congress in the Archaeological Resource Protection Act of 1979, Public Law 96-95, which Senator Domenici cosponsored with Representative Udall. Section 4(b)(4) specifies that "the archaeological resources which are excavated or removed from public lands will remain the property of the United States" and requires that the collections of artifacts and related documentation be preserved in a suitable university or museum. Section 5(2) authorizes the Secretary of the Interior to develop regulations for the disposition of these archaeological resources.

The final Uniform Regulations for the Protection of Archaeological Resources under ARPA were promulgated by the Departments of Agriculture, Defense and Interior and the Tennessee Valley Authority on January 6, 1984. Section 13(c) mentions the discretionary authority of the Secretary of the Interior to set "standards by which archaeological resources shall be preserved and maintained," but does not address that issue. Section 101(a)(7)(A) of the 1980 Amendments to the National Historic Preservation Act of 1966 directed the Secretary of the Interior to issue regulations for curation. A draft document, Curation of Federally Owned Archeological Collections (36 CFR 79), is currently under review. It is essential that these rules and regulations emphasize standards rather than procedures and that a final draft be published soon to guide the actions of the many museums caring for federally-owned collections.

Laudable though the current efforts are, they do not represent an adequate federal response to the larger problem of long-term curation of the large and varied collections that are accumulating as a result of federal actions.

I realize that it is irresponsible of me to call for a more adequate federal response to this serious problem and then fail to suggest what that response might be. I hesitate to suggest the exact nature of that response other than to insist that it must involve some federal assistance to both the states and the private sector. The resources of state and private organizations are simply not adequate to the task, and the sense of responsibility for these collections that has thus far justified state and private expenditures for curation is not a substitute for the needed resources. It is possible that the federal assistance can be provided by existing programs and through existing mechanisms. Perhaps what is needed, more than anything else, is a new charter for the federal-state partnership that is such an important hallmark of our system of government, a charter that will identify innovative and creative ways that existing mechanisms may bring expanded resources to bear on the curation problem.

Once again let me draw upon my Arizona experience to offer an example. For many years the Bureau of Reclamation has been constructing the Central Arizona Project, a system of aqueducts and reservoirs to bring water from the Colorado River into central and southern Arizona. Several research organizations have carried out extensive excavation projects to mitigate the impact of this huge construction effort. Some of these organizations have no repository capability of their own, which places even more pressure on existing museums.

The exact size of the total collection currently held and being studied by all CAP contractors is unknown, but it is known that it is so large that no museum in Arizona could assume responsibility for it without substantial financial assistance. Yet, all participants in the CAP effort are agreed that these valuable research collections should stay in Arizona and that they should be curated in one place. This seemingly impossible situation has stimulated a unique example of federal-state cooperation involving the Bureau of Reclamation, the National Park Service, and the University of Arizona.

The Bureau of Reclamation recognized that it is responsible for providing adequate curation for the archaeological collections recovered through its mitigation projects. Lacking curation expertise and facilities, it requested the Western Archeological and Conservation Center of the National Park Service to take over that responsibility at Reclamation expense. The National Park Service facility in Tucson includes a Museum Collections Repository supervised by John Clonts that cares for large collections from three National Park Service regions and several Indian reservations. It has the expertise and experience to undertake the curation of the huge CAP collections, but it lacks the personnel and the authority to expand its personnel roster to carry out the necessary curatorial work. The Western Archeological and Conservation Center turned to the Arizona State Museum at the University of Arizona, as it has done several times in the past, and requested that the Museum provide the needed curatorial personnel and professional assistance under the authority of a Cooperative Memorandum of Agreement being developed by the two organizations.

The Arizona State Museum has always placed a high priority on the quality of its collections care, has pioneered in the use of computerized collections management methods, has developed new, cost-effective procedures for handling large research collections of archaeological materials, and has a ready pool of potential curatorial specialists through its Museum Studies program. The Museum, in cooperation with the Department of Anthropology at the University of Arizona, has been training museum specialists at the Master's level since 1968. This program covers all aspects of museum work in anthropology museums, but places special emphasis on collections management. Graduates of the program are professionally employed all over the country. The University of Arizona has trained more of the museum specialists with MA degrees working in anthropology museums than any other educational institution.

This innovative cooperative effort to curate the CAP collections has the advantage of meeting all of the requirements that at first seemed so impossible to achieve and of accomplishing that goal using existing federal procedures for cooperative activities.

The federal agency that funded the projects that generated the collections, the Bureau of Reclamation, also pays for the cost of curation.

Another federal agency that has extensive experience in curation, the National Park Service, provides for the storage and care of the collections through its Western Archeological and Conservation Center.

A state organization with a national reputation for collections management, the Arizona State Museum, provides the professional personnel to carry out the curation project only during the period when increased personnel are needed.

The federally-owned collections of the Central Arizona Project remain under federal control in Arizona and in a single repository where they will be accessible to future researchers.

This cooperative effort is the result of creative use of mechanisms already available to the federal agencies and does not require a request for any new legislative authority.

We hope that this example may serve as a model for other cooperative ventures in the curation and management of federally-owned collections. It is possible that some agencies will be timid about innovative actions without an explicit congressional mandate. It is possible that some agencies will be unable to act despite their creativity because of lack of funds or lack of budgetary authority. It is possible that some agencies will not be able to carry out their curatorial responsibilties, despite their creative desires and despite the intent of the Congress, because of policies and actions within the Executive Branch.

Mr Chairman, the archaeological and museum communities of this country, and especially the directors of the museums facing the flood of federal archaeological collections, urge that this Committee translate into action its concerns about that portion of the nation's archaeological heritage that has been saved from destruction by federal projects: action that will make the federal responsibility to curate federally-owned archaeological collections no less mandatory than the responsibility to recover them in the first place; action that will encourage new and creative forms of cooperation between the responsible federal agencies and appropriate state and private organizations; action that will provide needed federal assistance to the state and private partners able and willing to assume some responsibility for helping to solve the increasingly serious curation problem.

Senator Domenici. Thank you very much. Dr. Brody, University of New Mexico, we will proceed with you and then we will have some questions, I believe, of all four of you.

STATEMENT OF DR. J.J. BRODY, ART DEPARTMENT, UNIVERSITY OF NEW MEXICO

Dr. Brody. Thank you, Senator. I am Jerry Brody and I'm a professor at the University of New Mexico, former director of the Maxwell Museum of Anthropology and research curator at the Maxwell Museum. Millions of objects that are owned by the Federal Government, because they have been recovered from Federal lands, are curated by non-Federal institutions, most of which are museums. The assumption is that these objects will be cared for to perpetuity. There are no consistent Federal guidelines or supervisory procedures regarding the curation of these properties, and there are no procedures for establishing the costs of caring for them, nor is there agreement concerning Federal responsibilities for cost sharing.

Research projects and environmental clearance contracts by non-Federal investigators and contractors done on Federal lands result in the systematic collection of cultural objects through excavation and surface collecting. These objects are Federal property, but are usually curated by non-Federal institutions. The objects may number in the millions, and their interpretive and scientific value is a function of the quality of the documentation and the ability of institutions to retrieve information associated with the objects.

A very small proportion of these objects are whole artifacts that have exhibition or market value, but even fragmentary objects that can be associated with their documentation are a nonrenewable cultural resource whose research potential can never be exhausted.

There is great variation among Federal agencies in their policies concerning these collections. The National Park Service, for example, assumes direct responsibility for curation of objects often, and also for caring for related archives from National Park Service land or it has well-defined procedures to control their curation by non-Federal institutions. Few other agencies even know what materials from their lands are held by non-Federal institutions or have procedures to regulate their curation.

There are no consistent Federal guidelines regarding the curation of federally owned properties and their documentation by non-Federal institutions. Because of these inconsistencies and the absence of guidelines, as well as because of past practices, whereby the curating institutions were free to treat federally owned collections as though they were their own property, there is a good deal of uncertainty among both Federal agencies and the curating museums regarding the responsibilities that non-Federal museums have to these properties.

For example, are non-Federal museums which have held Federal cultural properties for decades without any Federal recognition of that fact, obliged to inform the government of these holdings? Are Federal objects to be insured, and if so, who pays? Are they to be repaired when they are broken, and if so, who pays? What about liabilities of things that are lost or broken or if they are repaired badly? May they be loaned to other institutions? And so forth.

There are other problems and I would suggest that proposed solutions to them could follow these guidelines. One, that there should be a single set of Federal guidelines regarding the curation of all federally owned cultural objects and their documentation should be created.

Two, that management of those guidelines should be under the supervision of a single authority. Three, that curation of federally owned cultural property should be considered as an entirely separate issue from whatever research, environmental clearance or other activity recovered the objects from Federal lands.

And finally, that curation should be contracted for under a standardized system that includes compensation to the curating institution according to some agreed upon formula, and that contracts for curation should be for set periods, should be renewable upon mutual agreement and compliance by the curating institution with Federal curation guidelines should be regularly monitored. Thank you.

[The prepared statement of Dr. Brady follows:]

CONGRESSIONAL HEARING, ALBUQUERQUE, OCTOBER 14, 1985.

CURATION OF NATIONALLY OWNED CULTURAL ARTIFACTS BY NON-FEDERAL INSTITUTIONS.

J. J. Brody, Professor, Dept. of Art, University of New Mexico, Albuquerque, Research Curator and former Director, Maxwell Museum of Anthropology, University of New Mexico.

I. The Nature of the Problem.

A) Millions of objects that are owned by the Federal government beacuse they have been recovered from Federal lands are curated by non-Federal institutions most of which are museums. The assumption is that those objects will be cared for to perpetuity.

B) There are no consistent Federal guidelines or supervisory procedures regarding curation of those properties.

C) There are no procedures for establishing the costs of caring for these properties nor is their agreement concerning Federal responsibility for cost sharing.

II. Discussion of the Problems.

A) Research projects and environmental clearance contracts by non-Federal investigators and contractors done on Federal land result in the systematic collection of cultural objects through excavation and surface collecting. These objects are Federal property but are usually curated by non-Federal museums.

B) These objects may number in the millions and their interpretive and scientific value is a function of the quality of their documentation and the ability of institutions to retrieve information associated with the objects. A very small proportion of these objects are whole artifacts that have exhibition or market value but even fragmentary objects that can be associated with their documentation are a non-renewable cultural resource whose research potential can never be exhausted.

C). There is great variation among Federal agencies in their policies concerning these collections. NPS for example assumes direct responsibility for curation of objects and related archives from NPS land or has well-defined procedures to control their curation by non-Federal institutions; few other agencies even know what materials from their lands are held by non-Federal institutions or have procedures to regulate their curation. There are no consistent Federal guidelines regarding the curation of Federally owned properties and their documentation by non-Federal institutions.

D) Because of these inconsistencies and the absence of guidelines as well as past practices whereby curating institutions were free to to treat Federally owned collections as though they were their own property, there is a good deal of uncertainty among both Federal agencies and the curating museums regarding the responsibilities that non-Federal museums have to these properties. For example, are non-Federal museums which have held Federal cultural properties for decades without any Federal recognition of that fact obliged to inform the Government of these holdings? Are Federal objects to be insured, and if so who pays? Are they to be repaired when broken and if so, who pays? What about liabilities if things are lost or broken or if they are repaired badly? May they be loaned to other institutions? And so forth.

E) The situation is often compounded when, as often happens, a non-Federal museum is used as a repository for objects collected by researchers, contractors or Federal investigators who were not directly responsible to the curating museum or are professionally unconcerned with curatorial problems, collections management, and the perpetual care of objects. In those cases, objects may be deposited with incomplete documentation and their integration into the collections system of the curating institution is often considerably more expensive than when objects are collected with institutional control over the collectors. Incomplete understanding of responsibilities, liabilities, and each others professional standards and procedures creates difficulties that are compounded by the Federal practice of holding institutions (especially Universities) responsible for the perpetual curation of materials that are collected under Federal permits granted to their employees. Curatorial responsibility should be contracted for separately from collecting authority.

F) Costs of curation which involves both the expenses of processing materials so that they may be located, retrieved, and reintegrated with their documentation and of storing them in secure and properly controlled spaces can be high and neverending. Those costs are rarely recovered by the curating institutions because they are difficult to compute and there is little agreement about sharing responsibilities. One consequence of the situation is that both staff and space of non-Federal institutions which curate Federal materials are stressed; sooner or later the choice will be between curating properties owned by an institution or by the Federal government.

III. Proposed Solutions:

A) A single set of Federal guidelines regarding curation of all Federally owned cultural objects and their documentation should be created.

B) Management of those guidelines should be under the supervision of a single Federal authority.

C) Curation of Federally owned cultural property should be considered as an entirely separate issue from whatever research, environmental clearance or other activity recovered the objects from Federal lands.

D) Curation should be contracted for under a standardized system that includes compensation to the curating institution according to an agreed upon formula. Contracts should be for set periods, should be renewable upon mutual agreement, and compliance by the curating institution with Federal curation guidelines should be regularly monitored.

Senator **Domenici**. Thank you very much. Let me ask a couple of questions, and then I will yield to Senator Bingaman. I do want to get the Bureau of Land Management to address your issue and they will be doing that very shortly, along with your example of roads. I think that ought to be one of the things we ought to get out here on the paleontological side. What are we doing? Clearly your suggestion that we get the government out and that won't work. I mean, you like that, but I guarantee you that for anybody to try that, it would be 50 to 1 opposing it because they would be afraid nobody would be involved. I'm not saying you are right or wrong but we are going to try to get answers on that from them. If you can stay, we may need to call you back and have a little exchange about it. Is that fair for you?

Could I ask, with reference to curation, Doctor Thompson, you got on a little discussion of innovative ways and then you settled in for innovative mechanisms that were kind of a cooperation or a joining of forces and you said you ought to begin with innovation. Is it possible that with the fast moving technology that we ought to do some research in curation techniques, as well as the kinds of things you discussed?

Dr. **Thompson**. Mr. Chairman, it would be helpful, of course, to have some research on curation-type needs, but I think that many of the museums that have been involved with the care of Federal collections have been faced with such difficulties that they have already responded by developing a variety of interesting new techniques and procedures that are efficient and cost effective. Their problem now is that they do not have the resources to put them to work adequately.

Senator **Domenici**. You have impressed me. I will tell you that, all of you, that it is really kind of ridiculous to go be going through this enormous effort at gathering up and conserving if we have no way of preserving it thereafter, or if we end up with a little. As I understand, we don't even know what we have got when we have curated it, much less the inventory of unprotected material. That's rather astounding and if it's as large as you are saying, and I have no doubt that it is, it's a very, very devastating notion to us, those of us who support preserving, if we don't even know where it is. It can't be indexed, it can't be curated.

But I was referring to scientific, technological evolution of ways that we might, as a nation, be able to catch up with this backlog, aside from resources. I'm not talking about taking the resource away from curation, but we are moving so fast in areas of technology that I'm just wondering, is there any room for science and technology to look at better ways so we can expedite this backlog, or is that all behind us, already done?

Dr. **Thompson**. Mr. Chairman, I would be the last to insist that we already know everything. Certainly the ideas that have already been generated for computer assisted approaches could certainly stand a good deal of caressing to make them better. I think that if there's any one area in which we need a great deal of new research, it's in the proper storage of specimens of this kind. We are wasteful and inefficient in our present methods, and when people have mentioned the size of collections and the size of the ware-houses that are being built, we could certainly use some help in those areas.

Senator **Domenici**. Do you agree, Dr. Brody?

Dr. **Brody**. Yes, indeed.

Senator **Bingaman**. Let me just be sure I'm clear on this. There is not, at the present time, a national inventory or central location where a person could go to find what is available in various collections around the country, is that right?

Dr. **Thompson**. No, sir. There is no national system. There is a growing body of material developing in a number of States, particularly here in the West and we believe that as these State efforts mature, it will be possible to develop perhaps not a computer inventory of the entire Nation's resources, but an index and abstracting approach to these State data bases, which will be itself based on computer activities. Surely that is some distance away, unless resources beyond those already available to the States are made available to move this activity along much faster.

Senator **Bingaman**. It strikes me and I'm sure it's a very poor analogy, but the Library of Congress, for example, does have the ability to access and to tell you what is available, published virtually everywhere in the country, and virtually everywhere in the world. Would it be valuable for the Federal Government to identify a central location and assign specific authorities so that a central index exists and people who are researching this would be able to go to one place to find out what is available in collections throughout the country?

Dr. **Thompson**. Sir, there's been a good deal of discussion of that in recent years. I think that I can say that it is the deliberate opinion of the archeological and museum profession that a national center, particularly at this stage of the game, would probably be very difficult to develop and would be inefficient. The nature of archeological remains are such that they are highly specific to the conditions of the different geographic areas of the country. For example, I think that it would be more efficient to ask the four or five southwestern States, which deal with archeological materials in a large prehistoric cultural area that shared many things, to perhaps combine some of their computer assisted programs and develop a regional inventory, and perhaps another one in the southeastern United States rather than trying to go for the very massive effort that would be required for a national program.

Senator **Bingaman**. Dr. Lucas, I gather that your suggestion in regard to paleontology is we either get out of it, the federal government get out of it, or we set up a separate regulatory system which would actually work and would try to prevent the kind of activity that we are interested in preventing, but not prevent people who are seriously researching these things? Which of those two did you come down on? Do you want us in or out?

Dr. **Lucas**. I think the Federal Government's track record is so poor in paleontology that right now my personal opinion is for it to leave paleontology. I think that obviously Senator Domenici may feel that it's an unrealistic point of view and maybe it is, but one has to consider whether or not the Federal Government can create legislation that specifically protects paleontology and the fact that 5 or 10 years from now another hearing may be held for paleontology in which paleontologists will point out the large variety of problems that have been created by Federal regulations and the need for more money, et cetera. That's my own personal view on that issue.

Senator **Domenici**. I want to be clearly understood, that I didn't say that I might not be receptive to the idea as a Senator. I might. I just feel it would be almost impossible to sell a notion to the U.S. Congress that on the public land, we would have nothing to say about paleontological activity. We understand the difference here, I think, and I'm sure those committees that would study that request on the part of paleontologists such as yourself would understand the difference, but I can't believe that they are going to step back and say, this is such a marvelous thing that we aren't even going to be involved in what they dig, how big they dig, what they do on our land. We have got to find a way to do what you are doing and not be inhibiting. I can't believe the Government will say this is none of our business. That's the basis on which I made my statement.

Senator **Bingaman**. Dr. Bawden, you used to be at the Peabody Museum at Harvard, and I think Dr. Thompson had said something in his statement that it's generally agreed that archeological finds should try to be kept in the State that they are located in and curated there, as I understand it. My perception after having wandered through the Peabody Museum a few times is that you have much better collections there of Mimbres pottery and some of the things which are found in this State than anybody in this State does, than your own Maxwell Museum, for example. Could you just comment on the extent to which most of the archeological treasures that have been found in this State are really located elsewhere?

Dr. **Bawden**. Yes. Certainly if one thinks of the big eastern museums such as the Peabody, certainly the Smithsonian Institute, just to name two—American Museum of Natural History, probably as well, their collections are certainly greater than most regional ones, but this reflects the development of the discipline of the museum, the fashion and the development of the discipline of anthropology, of course.

Back in the late 19th century, early 20th century when the big excavations were commenced in the Southwest, being directed from eastern establishments, by and large, at first, then this was totally accepted. This was where the focus of the southwestern research was situated. That has changed entirely now. So that more and more, collections are being generated in the regions and staying in the regions and therefore, raising a whole different set of curatorial problems that were not present in the region 50 years ago. It's a historic development where you found these massive collections in the East. Now that I'm here, I would like to see some of them come back, of course.

Senator **Bingaman**. That's all I had. Thank you.

Senator **Domenici**. Let me do two things. I understand in April 1985, in the joint publication of the Paleontological Society and the Paleontological Research Institute numbered volume 3, No. 2, there's a letter that was written by the New Mexico Paleontological Society to Mr. Svahn in the White House recommending that they be permitted to be of assistance to the Bureau of Land Management with reference to formulation of regulations. I think it's a very interesting letter and states what they have done, what the Bureau has done and what they wish the President would do in terms of letting them be helpful. I would like to make that a part of the record if you have no objection. Also I would like to make the National Academy of Sciences of the Committee on Paleontological Collecting revised draft report 98–35 a part of the record at this time, if there's no objection.

[The material submitted by Senator Domenici follows:]

U.S. Department of the Interior,
Washington, D.C.

Mr. John Svahn,
Assistant to the President for Policy Development,
The White House,
Washington, D.C.

Dear Mr. Svahn: As President of the Paleontological Society, I write to express the concern of our members about the most recent attempt of the Bureau of Land Management (BLM) to regulate the collecting of fossils on Federal Lands. Our members are extremely concerned about any attempt to limit their access to the data base of their science, which is the fossils found in rocks.

The Paleontological Society, now 77 years old, is the largest private organization of paleontologists in the world. Our membership includes invertebrate paleontologists, vertebrate paleontologists, paleobotanists, micropaleontologists, and applied paleontologists. The vast majority of our members earn their living by paleontologic work, and are variously employed in colleges and universities, museums, geological surveys, and in industry (principally oil companies). The Society publishes the Journal of Paleontology, Paleobiology, Paleontological Memoirs, Short Course Notes, News and Notes, and Special Publications.

In 1982, the BLM published proposed regulations for paleontology in the Federal Register. These proposed regulations were drafted by non-paleontologists, with virtually no input from those knowledgable in the science of paleontology. The proposed regulations were subsequently withdrawn, after BLM received many hundreds of letters pointing out the naivete and amateurish nature of the regulations. However, the BLM now has a 46-page draft document, on Management of Paleontological Resources, planned to be published as a BLM Handbook, and abstracted for the BLM Manual. As another attempt to regulate fossil collecting, it also was drafted by persons who have no knowledge of field paleontology, and who provided no vehicle for public comment. The cover of the report is indicative of the content; it shows a large carnivorous dinosaur holding a small dead dinosaur, and staring at a sign with the BLM logo that reads "No Grazing Beyond This Sign." A copy is enclosed.

The Paleontological Society, the Society of Vertebrate Paleontology, and the State of New Mexico, all volunteered to help the BLM draft an informed policy, but all offers of help were rebuffed.

The State of New Mexico has in effect a plan for paleontological collecting on State Lands; it is the only such plan available in the Nation. It cannot serve as a model for the BLM plan, or as an in the BLM plan, while the National Academy of Sciences Committee on Guidelines for Paleontological Collecting formulates permanent guidelines. The National Academy of Sciences Committee is a professionwide group, and includes a paleontologist who is a member of the Academy, several professional field paleontologists, and State and Federal Government employees.

In 1984, the Department of the Interior received only 40 to 50 permit applications to collect fossils on Federal Lands. The BLM proposes a budget of $400,000 in fiscal year 1986 to process its share of those permit applications. This would be a cost of $8,000 to $10,000 per permit application if all were submitted to the BLM. The BLM would involve all of their State and District Offices in the permit processing procedure, and administer the program from Washington. This very cumbersome procedure was devised by people with no knowledge of field paleontology. Administering 40 to 50 permit applications a year is not a full time job for one person, much less a manager with staff in Washington, and a dozen or more persons in BLM State Offices.

The Department of Interior does have excellent professional paleontological expertise in the United States Geological Survey [USGS]. These USGS paleontologists have full time jobs in this field, most hold PhD degrees, and have long experience and outstanding reputations in research and field paleontology. The Department of Interior permit application program for collecting fossils on Federal Lands should be housed in the USGS, and coordinated with the individual needs of each of the land managing agencies. Certainly each Bureau in the Interior Department need not develop a separate paleontological program, as the paleontological expertise already resides in the USGS. This "rediscovery of the wheel" procedure is unnecessary, expensive, and a duplication of There is no need or excuse for BLM, the Bureau of Indian Affairs, National Parks Service, Bureau of Reclamation, etc. each to develop a program for processing paleontological permits, when these totally only 40 to 50 applications annually.

Please feel free to write, or to telephone me (213) 825-2563, at any time.

Sincerely yours,

HELEN TAPPAN LOEBLICH,
President, The Paleontological Society.

NATIONAL ACADEMY

of

SCIENCES

Committee on Paleontological Collecting

Revised Draft Report

Parts I-III

9/30/85

PART ONE

INTRODUCTION

I Fossils, Regulations, and Industry: the emerging problems.

II Purpose of the Report.

III Basic Concepts in Paleontology.

IV Organization of Paleontology in the United States.

V Current Problems Affecting Paleontology as a Science.

  (A) Paleontology and Regulatory Policy.

  (B) Permits for Paleontological Work on Public Lands.

  (C) Paleontological Resources and Land Development.

INTRODUCTION

I Fossils, Regulations, and Industry: the emerging problem.

Paleontology is the study of fossils, the remains of once living beings, encorporated into the earth's rock record. These shells, bones, leave, etc. are the record of the history of life on the planet. Fossils are the focus of interdisciplinary study by biologists and geologists, because they provide the basic data for evolutionary studies, measurement of time, and understanding ancient environments and geographies.

Over the last one hundred years, American paleontologists have built collections of fossils, in both public and private institutions, which are unmatched in the world. The continual vitality of paleontology is nurtured by the Nation's extraordinary richness of sedimentary rocks containing fossils that span 3 billion years of earth history. The public at large has also participated in the growth of paleontology, through educational exhibits in museums across the country, and through the interests and abilities of amateur collectors. Scientific suppliers and commercial dealers have likewise made fossils available to private and institutional buyers. Neither by tradition, nor by Federal Law, have fossils been the proprietary possession of a single constituency.

Paleontology in this Nation has flourished in the virtual absence of legal strictures. Request for protection of particular localities have ordinarily been made by paleontologists themselves only after they had shown that a particular locality was unique. There has been no request from the community of paleontologists to "protect" all fossils. Recently attempts have been made to place fossils in general under the purview of State and Federal authority. This development is, in part, attributable to the common misconception that paleontology is the same as, or closely allied to, archeology. This misconception has led regulators to try and apply rules for archeological collecting to fossils, or to propose rules for fossils collecting that are based on rules for archeological collecting. In point of fact, there is very little overlap between archeology and paleontology. Archeology focuses on human cultural history over a time span ordinarily measured in thousand of years. Paleontology deals with the evolution of life on the earth through more than 3 billion years. Because old human artifacts are rare, archeology tends to treat them as all being of equal value. Paleontology does not treat all fossils as of equal valve, because there are trillions of fossils in the rocks. Human artifacts tend to be site specific, they are items that were discarded, placed in the earth, or built on the earth at certain places. Fossils on the other hand are part of the rocks in which they are found, and are as extensive as the environment in which the rocks formed. At the surface of the earth, rocks crop out in units called formations, the great majority of formations crop out over many miles of countryside. Archeology is allied to the social sciences, whereas paleontology is allied to geology and biology; the methodologies, concepts, and goals of archaeology and paleontology differ substantially. Nonetheless, over several decades, Federal and State land managing agencies have strengthened their point of view that fossils, "like archeological resources", require formal management and conservation policies. Few of these policies have actually promoted increase in the knowledge of fossils. To the contrary, current and proposed regulations would be obstructive to the study of the Nation's fossils. These regulations and guidelines threaten to have an adverse on science, and also on the most effective means of preserving and study fossils for research and education, which is to collect them and bring them to the laboratory. If current proposed Federal policies, on what they call the "paleontological resources" question, are implemented paleontology will become a concern for all land developers and coal mining operations in the Nation. The possibility of an adverserial relationship between industry and science is inherent in the Federal government's position that all "paleontological resources" need protection and mineral resources that deserve development for the Nation's needs.

Historically, paleontologists have explored widely on Federal and State Lands. When unique localities, such as Dinosaur National Monument, Jurassic, Utah and Colorado and Crawfordsville, Mississippian, Indiana, were identified, the paleontological community, asked for their protection. There is no point in restricting, or closely monitoring, access to fossil collecting on Federal and State lands, until they have been shown to be of extraordinary paleontological value. Likewise, there is no point in inventorying every fossil locality known on public land; this expense has already been borne by the scientific community and the information is already in the scientific literature.

II Purpose of the Report.

Preamble

In general, the Science of Paleontology is best served by unimpeded access to fossiliferous materials in the field, and thus is in sharp contrast to the prevailing situation in archeology and physical anthropology. In this context, 'access' is defined to include all collecting and removal of fossiliferous material for curation, preservation, and laboratory study. Furthermore, there is generally no scientific purpose served by special systems of notification before collecting and reporting after collecting, because these functions are performed well by existing mechanisms of scientific communication.

The committee recognizes that the previous paragraph applies to the scientific aspects of paleontological collecting, and that there may be land managing aspects that preclude collecting in a few situations. For example, collecting at Dinosaur National Monument requires limited access; in this case preservation of fossils in the field is in the best interest of science.

Fossiliferous deposits should not be thought to be a "resource" comparable to minerals and other conventional resources. This point of view has important bearing on the need of land managers to inventory and to limit access. Most critical fossil localities are recognized only after substantial collecting and study of the fossils. Thus, a site or a parcel of land does not have _a priori_ importance as a "resource" simply because it is known to be fossiliferous. From a scientific viewpoint, the role of the land manager should be to facilitate exploration for, and collection of, paleontological materials so that critical localities may be identified for future protection.

The purpose of the report is to provide a baseline OF THE NEEDS OF PALEONTOLOGY AS A SCIENCE, to any interested Federal, State, or Local agencies, companies, and other sciences. The Panel's report outlines the boundaries of science, government, and industry with respect to the meaning and use of fossils.

Inter alia, the following issues are addressed:

(1) Mechanisms of communication between paleontologists, public land managers, and industry representatives on matters relating to fossils.

(2) Recommended policies for land managers regarding paleontological activities on public lands, and on methods that may promote effective coordination on these policies.

(3) Assessment of paleontological opportunities that may arise in the course of surface mining and other types of land use, as well as the

potential for destruction of fossils.

(4) A review of the problems inherent in assessing the scientific importance of fossils and fossiliferous strata, and the theoretical and practical limitations of such assessments in salvage and management plans.

In offering these recommendations, the Committee's intent is to promote constructive relations between paleontologists and land managers at all levels; to allow land managers and developers to understand that fossils should not be treated in the same manner as artifacts; and to point out the avenues through which scientific expertise can be obtained when needed by government or company officials. At the same time, the report is designed to enhance the activities of professional paleontologist and other groups dedicated to the collecting and study of fossils.

III Overview of Paleontology

Paleontology is divided into two broad areas of study: (1) micropaleontology deals with fossils too small to be seen with the naked eye, they require the aid of magnifying equipment such as hand lenses, and optical and scanning electron microscopes in order to be studied, and (2) megapaleontology, which deals with fossils large enough to be seen with the naked eye.

Microfossils such as diatoms, pollen, radiolarians, conodonts, many foraminifers, etc., can be so numerous that there is absolutely no need to contemplate any policies or programs for their conversation or protection.

Although megafossils ordinarily can be seen and identified with the naked eye, it is common to examine them with magnifying instruments both in the field and in the laboratory. The abundance, and quality of preservation, of megafossils varies greatly both geographically and geologically, and no categorical statements may be made as to their availability and potential importance to science. Vertebrate remains are commonly among the rarest of megafossils. They usually occur as single, isolated and disarticulated bones and teeth; whole skeletons and concentrations of bones are uncommon and only occasionally found. Plant fossils are also generally rare and fragmentary; however, they are present in localized concentrations more often than are bones. Most commonly, the concentrations preserve a particular part of a flora such as silicified logs or carbonized leaf impressions. Invertebrates that secrete exoskeletons are the most common fossils found, particularly in marine rocks that were formed in relatively shallow water. Often invertebrates are a major constituent of the rocks in which they are found. In contrast to vertebrate and plant fossils, invertebrate skeletons are frequently preserved as complete specimens. Many important groups of invertebrates lack mineralized exoskeleton, and their preservation in the rock record is a rare occurence; some invertebrates that fall into this category are insects, annelid worms, and spiders.

IV Organization of Paleontology in the United States

Professional paleontologists in the United States are employed by a variety of private and public colleges, universities, geological surveys, and museums; by all levels of government, and in private industry. Altough the goals of individual paleontologists vary, several national organizations focus common interests and promote communication regarding fossil collecting, research and study of the evolution of life, and practical applications of fossils. Effective liaison and collaboration with the community of professional paleontologists is best undertaken through the following organizations:

(1) The Paleontological Society, which was founded in 1908, is the oldest organization of paleontologists in the United States. The Society publishes the Journal of Paleontology, Paleobiology, Paleontological Society Memoirs, Short Course Notes, Special Publications, and News and Notes. In 1985, paleontologists in the United States belonging to the Society totaled 1719.

(2) The Paleontological Research Institution was founded in 1932. The PRI publishes the Bulletins of American Paleontology, Palaeontographica Americana, Special Publications, and jointly with the Paleontological Society News and Notes. In 1985, paleontologists in the United States belonging to PRI totaled 627.

(3) The Society of Vertebrate Paleontology was founded in 1943. Previous to that date the SVP has been a Section of the Paleontological Society. The SVP publishes the Journal of Vertebrate Paleontology, Bibliography of Fossil Vertebrates, Special Publications, and a Newsletter. In 1985, paleontologists in the United Stats belonging to SVP totaled 889.

(4) The Society of Economic Paleontologists and Mineralogists was founded in 1926, having previously been closely allied to the Paleontological Society. The SEPM publishes the Journal of Sedimentary Petrology, Palaios, Short Course Notes, Work Shop Notes, Field Guides, Abstracts, Special Publications, and Reprints. From 1935-1985, the SEPM published the Journal of Paleontology jointly with PS. In 1985, SEPM had a total membership in the United States of 5500.

(5) The American Association of Stratigraphic Palynologists was founded in ...

(6) The Cushman Foundation for Foraminiferal Research was founded in ...

(7) The North American Micopaleontological Society was founded in ...

(8) The Paleobotanical Section of the Botanical Society of America was founded in ...

In addition to professional societies devoted to publishing research in paleontology, there are various groups of devoted amateur paleontologists throughout the Nation. These include: The New York Paleontological Society, the Delaware Valley Paleontological Society, The Middle American Paleontological Society, Dry Dregers, Cincinnati, Ohio, Western Interior Paleontological Society and a number of others. Some of these societies publish journals, in which research is printed, they commonly meet and have lectures by their members, or professional paleontologists, and they give their members forums in which to exchange information about localities and to trade and sell specimens.

There is also an American Association of Paleontological Suppliers, which was founded in 1978. The AAPS sets ethical goals for its members, and strives to make sure that "The economic goals of the Association's members shall always reflect the desire to meet both the research and educational needs of the scientific community and the interested public." In 1985, membership was 25 businesses.

V Current Problems Affecting Paleontology as a Science.

(A) Paleontology and regulatory policy.

The major problem confronting paleontologists today is a continuing and pervasive misunderstanding by land managing and regulatory agencies of the nature of paleontology. Indeed, it might be unreasonable to expect bureaucratic officials to have a thorough acquaintance with this scientific specialty. Nonetheless, regulatory policies have been promulgated and perpetuated, most recently by the Bureau of Land Management, reflecting the erroneous assumption that the methods and purposes of paleontology are similar to those in archeology. For example, Federal permits for paleontological field work require that a study area be defined in advance (as in case of an archeological site). It is not understood that paleontology focuses on large areas, that are delineated by outcroppings of a geological formation; in many cases these areas cannot be accurately predicted in advance.

These and other inappropriate stipulations, developed without consultation with the community of professional paleontologists, have fostered an unfortunate adversarial relationship between land managing agencies and many scientific institutions and individuals concerned with fossil collecting. Perhaps even more unfortunate is that intellectual efforts have been wasted on insubstantial issues, and that the Federal Government is inadvertently promoting the loss, rather than the conservation, of valuable natural history specimens.

Unlike archeological materials (in which, for example, a paleoindian site might be best preserved intact and in situ), fossils are only useful scientifically and educationally if they are collected and preserved. Fossils are exposed to human discovery by the natural processes of weathering and erosion, but by the same processes they are constantly being destroyed. Paleontological conservation is effective to the extent that the collecting and curatorial activities of professional paleontologists and other interested parties are facilitated.

Productive cooperation between governmental agencies that have statutory obligations to manage natural resources on public lands, and paleontologists, who are professionally commited to collecting fossils for research and educational purposes, is readily attainable. In order to reach this goal, however, the distinctive nature of paleontology must be recognized; above all, it must be conceptually dissociated from archeology.

Fossils are the result of organic evolution through billion of years of the earth's history. Countless species and populations are represented in rock formations which typically have large scale geographical and geochronological distributions. A single fossiliferous formation may extend over several counties or states, may encompass hundreds or even thousands of square miles of exposure, and may range up to thousands of feet in vertical thickness. Known or potential fossiliferous localities within a formation may not only be extremely numerous, but may substantially vary in the quantity and quality of the fossils present. Paleontologists are confronted with a scale of spatial and temporal distribution of materials that is orders of magnitude larger than in archeology. Archeologists are concerned with the historical development of human culture; archeological collections are comprised of the products of human activity over a limited time and within a relatively limited place.

Removal of archeological or cultural artifacts, be they tools or dwellings, diminishes or even destroys the value of the site for future study. Fossils, in contrast, are not intrusive into the substrate but are on integral part of the rocks. Removal of a fossil may not only ensure its preservation and utility for scientific and educational purposes, but does not foreclose the site either for further study or as source of additional fossils.

(B) Permits for Paleontological Work on Public Lands.

The process whereby professional paleontologists obtain permits to conduct paleontological surveys, or to collect fossils on public lands, has been neither simple nor expeditious. Prior to 1984, applications were filed with the appropriate agency in Washington (for Federal lands) or at a state bureau (for state lands). Although this appears to have been a centralized process, in fact the receipt of Federal permits was frequently delayed by the practice of administrative review at the state and/or district land management level. On numerous occasions permits were not granted by the projected starting date of field work and were the source of troublesome and costly delays. It is worthwhile noting that paleontologists employed by the United States Geological Survey, the U. S. National Museum, and other Federal agencies were exempt from permitting obligations despite the fact that they were doing precisely the same kinds of research as scientists from public and private educational institutions.

Beginning in 1984, permit processing was further decentralized to state and even district offices. Applicants are not only confronted with the increased burden of filing with two or more offices (if the proposed field area is large, as is often the case), but also with an inevitable increase in regional idiosyncracy of application procedures and regulations. Several agencies in the Department of the Interior have been instructed to promulgate their own rules and regulations; if this directive is undertaken without consultation with the professional paleontological community or interagency coordination, the science of paleontology and the future conservation of fossils will be disadvantaged for no purpose. It is imperative that current rules and regulations governing paleontological permits be restructured on the basis of careful consideration of the goals of science, government and industry.

(C) Paleontological Resources and Land Development .

The United States Government is the largest single landowner in the Nation. The largest tracts of Federal lands are located in the western states where an arid climate and a topographically varied terrain expose numerous geological formations rich in fossils. The potential uses of these so called "public" lands are many; from a managerial standpoint, the most important are mining, pipeline, oilfield and highway construction, wildlife conservation, recreation, and livestock grazing. Any use that significantly and permanently alters the natural setting of landscaps that expose sedimentary rocks, will also probably lead to the loss of fossils.

Federal and state land managing agencies have become increasingly aware of the difficulties of assessing the impact of land development on fossils. The problem is particularly acute in cases of large strip mines where the defined and substantial economic value of a fuel resource must be weighed against the ill-defined scientific value of largely unknown fossils.

PART TWO

PALEONTOLOGICAL COLLECTING

I Uses of Paleontological Specimens and Data
    (A) Research
    (B) Education
    (C) Recreation
    (D) Commerce
II Nature and Importance of Collecting
III Environmental Impacts

PALEONTOLOGICAL COLLECTING.

I Uses of paleontological specimens and data.

(A) Research

Nearly two centuries of study of fossils has drammatically changed humankind's prespectives about life on the planet Earth. Among other things, research has shown (1) life has existed on the planet for approximately 3.5 billion years, (2) life has been highly diverse for about 600 million years, (3) life changes (evolves) through time, (4) fossils can be used to correlate geological events, and solve geological and biological problems, and (5) human beings evolved relatively late in the history of the planet, about 2 million years ago. Research in paleontology will continue to provide insights into the histories of life and the Earth.

Ultimately, all research in paleontology is based on specimens of fossils obtained from rocks. These specimens provide the raw data, which can be developed into theory. Theory changes with time as new specimens provide new data, as laboratory technique improve, and as theory from other sciences is integrated with paleontological theory.

In the United States about 4000 persons earn their livings doing research in paleontology. They are employed by colleges, universities, museums, geological surveys, and companies. Basic research in paleontology is diverse, and includes everything from describing a new species to developing new theory to explain how living things survive global catastrophes. Applied paleontology is often devoted to biostratigraphy and paleoecology, which allow solutions of geological problems for scientific, cartographic, and profit reasons.

(B) Education.

The popularity of exhibits of fossils in museums around the world shows dramatically the use of specimens for educational purposes. These displays demonstrate first hand, and in reconstructions, how past life differed from present life, and they show the evolution of many groups of plants and animals. Nowhere on the planet today are there saber-toothed cats, giant ground sloths, dinosaurs, trilobites, or rostroconchs. Countless other species have become extinct, yet those alive today are descendants of various extinct species. In addition to museums, most secondary and tertiary schools have specimens of fossils for students to examine, and make interpretations.

Books about past life are exellent for educational purposes, and are widely read by the American public. However, nothing take the place of the experience of handling actual specimens upon which theory has been based. To read about a dinosaur is not the same as seeing a fully mounted skeleton of a sauropod with head 15 feet in the air and 80 feet from the end of the tail. There is a continuing need for specimens for display and teaching.

(C) Recreation

It is estimated that as many as 500,000 persons in the United States collect fossils as a hobby. On any fair weather day, from the shores of Chesapeake Bay, to the hills of Cincinnati, and the mountains of the Great Basin, hundreds to thousands of people may be collecting fossils for the pure please of the "hunt". These amateur paleontologists spend many hours cleaning, classifying, and trading specimens. Many fine specimens collected during a recreational paleontological "hunt" are given to professional paleontologists for research or educational purposes. (Do we need to say something about overenthusiasm?)

(D) Commerce

The use of fossils for profit is especially important in the search for fossil fuels and stratibound minerals. Various companies hire, or contract, paleontologists for both field and laboratory work in correlating geological sequences and events, which provide the companies with clues as to where to explore for fuels and minerals. It has been the experience of most field paleontologists that companies are very helpful in bringing unusual, or large, specimens to the attention of the profession.

Throughout the Nation, it is common to quarry fossiliferous limestone of all ages. Most quarries are small operations in contrast to the often massive undertakings of energy or mineral companies. However, most quarry owners cooperate with paleontologists by allowing them to collect in the quarry, and by setting aside particularly large or unusual specimens exposed by quarrying activities.

On still lesser scale, fossils are an item of commerce exploited by companies that "mine" them for sale to museums, schools, hobbyists, and as aesthetically pleasing or decorative items. A few fossils, such as opalized shells, are important in the gem trade. (we need to say something about conflict with professionals here?)

II Nature and importance of collecting.

The data base for paleontology is fossils found in rocks. The vast majority of rocks exposed at the surface of the Earth were formed long before human beings evolved. Thus, we have no direct basis in the experience of our species for relating the events represented by a sequence of rocks in one place, to the events represented by a sequence at another place. This situation is further complicated by the repetition of rock types through time; a rock formed one million years ago can look exactly like one formed 500 million years ago. This is because the geological processes by which rocks are formed in the crust of the Earth have been essentially the same for a very long time. Fossils allow the comparing and matching of sequence of rocks at different places on the Earth's surface (biostratigraphy). The ability to correlate rock sequence allows the determination of the geographic extent of valuable metals, fuels, building stones, and other natural resources.

The overwhelming majority of fossils occur in sedimentary rocks, and about 75% of the rocks exposed at the surface of the Earth are sedimentary in origin. Paleontologists and biostratigraphers trace geneologies of species of fossils through geologic time. They look for ancestors and descendants. It is the evolution of new species, which does not repeat in time, that allows correlation of rocks by fossils.

Paleontology and biostratigraphy are physically demanding sciences, and require hard work. It is not possible to stay in the laboratory and determine the succession of species geneologies through time. To do this, one must spend a great deal of time out of doors collecting samples and hauling rock. Once the samples are collected, they must be brought back to the laboratory. There, the samples require preparation with rock saws, dental drills, pneumatic chisels, ultrasonic mashines, inorganic and organic acids, or other mechanical and chemical procedures. Preparation may take days, weeks, months, or , for a dinosaur, years. Once the fossils are freed from the rock, they can then be studied and interpreted. Often the rock itself provides information about the environment in which it, and the fossils, were deposited. Whether fossils are collected for research, education, recreation or profit, the field and laboratory precedures are nearly identical.

III Environmental impacts.

The environmental impact of paleontological collecting is vanishingly small compared to the natural (fire, wind, rain and snow) and manmade (road building, urbanization, power lines) processes that alter the landscape. Most paleontological collecting is restricted to less than three cubic yards of rock, and most paleontological laboratories do not have the capacity or personnel to process more rock in a year. Furthermore, a single paleontologist probably could not look at, evaluate, photograph, and describe, more specimens in a year, than are contained in such a modest sample of the Earth's crust.

Fossil collecting does not become site specific until the field work is quite far along. In the reconnaissance phase of collecting, paleontologists travel widely over large areas. This is because sedimentary rocks were commonly formed over sizeable areas, and they now crop out at the surface of the Earth in large mappable units called formations. Every outcrop of a formation is not equally productive of fossils. Paleontologists will walk along an outcrop belt until they find the most fossiliferous localities. They may map such localities and return to collect them when the reconnaissance is finished. Collecting fossils that are weathered free from the rock and resting on the surface of the outcrop ordinarily has no environmental impact at all. In fact, if such specimens are not collected, they will continue to weather and decay by natural processes, and eventually become particles of sediment as part of the natural process of landscape change. Collecting any rock, from anywhere, does impact some microhabitants, for example, it would be unwise to collect rocks near the nesting site of a rare bird during mating season.

As noted previously, paleontology can be divided into two broad areas of study: micropaleontology, which deals with fossils too small to be seen without the aid of a microscope, and megapaleontology, which deals with fossils large enough to be seen with the naked eye. The largest number of paleontologists are micropaleontologists, most of whom are employed by companies because small fossils are most often preserved whole in cores and cuttings obtained from drilling.

Some microfossils are so abundant that tens of thousands of them can be found in a cubic inch of rock. In most cases, micropaleontologists need much smaller collections than do megapaleontologists. When collecting from outcrop sections of rock most micropaleontological collecting will have negligible environmental impact when compared to the natural processes of talus and scree formation. A paleontologist working for a summer field season in Alaska has almost no environmental impact. The ordinary winter in Alaska, or a herd of 100,000 caribou passing over the same outcrop, will remove all traces of ordinary paleontological collecting. It is common for paleontologists to return to a collecting area and not be able to determine the exact points from which the previous season's collections were made because of the weathering and erosion that occured since the last time they were there.

Among megapaleontologists, the greatest environmental impact is by those who collect the largest fossils or conduct large field paleoecologic studies. A pit dug to remove a large sauropod dinosaur will leave a small quarry on the hill side or valley floor. Dinosaur National Monument has left a scar on the mountain side. However, vertebrate fossils are not ordinarily found as articulated skeletons or in mass accumulations. Most commonly, vertebrate paleontologists study disarticulated skulls, disarticulated axial and appendicular bones, and teeth.

Fossil deposits that show unusual preservation, such as Burgess Pass, Alberta, and Stewart Valley, Nevada, may also result in quarry type operations. However, for the most part collecting of ordinary invertebrate and plant fossils results in little environmental impact, and may not even be noticeable from field season to field season because of the natural processes of landscape evolution.

PART THREE

ASSESSMENT of SCIENTIFIC VALUE

It is difficult to determine the scientific value of a fossil specimen. In part, determination is dependent upon the end the scientist has in mind, upon who is examining the specimen, his/her research interests, his/her knowledge, and the stratigraphic and geographic data accompanying the specimen. The process of establishing scientific value of a fossil is very judgmental, and the old adage "One man's trash is another man's treasure" holds true. In part, this is because the value of specimens can change with time as new technologies are developed to examine specimens and new theory is developed to interpret them. For example, the Cambrian species *Fordilla troyensis* was described in 1873. Its classification was debated for 100 years, and not settled until 1973 when specimens were examined with a Scanning Electron Microscope. It then became clear that *F. troyensis* was important for understanding the origin and early evolution of bivalved mollusks. The SEM has also opened an entirely new area of study for interpreting early mollusks, because we can now study microstructure of the shell as replicated on the outer surfaces of small (0.5-5mm) phosphatic and dolomitic internal molds.

It is probably correct to say that every fossil has some scientific value. However, it is also correct that some fossils have more scientific value than others. Also, it is not possible to collect all of the trillions of fossils that exist in sedimentary rocks. Countless fossils weather and erode away daily, and countless others are destroyed when coal is burned, limestone is quarried, and so on.

Archaeopteryx lithographica, from the Jurassic rocks of Germany, is regarded as a very significant species of fossil because it combines features of both birds and reptiles; it is known from only six specimens. *Platystrophia ponderosa* is an extremely common shell in the Upper Ordovician rocks of the tristate area of Ohio, Indiana, and Kentucky, and almost every museum in the world has some specimens of this species. Its very commonness makes *P. ponderosa* a useful biostratigraphic marker in that tristate area. However, for most paleontologists, the evolutionary significance of *Archaeopterix lithographica* is more important than the regional biostratigraphic significance of *Platystrophia ponderosa*. Numerous species of fossils are known to be useful biostratigraphic markers; however, far fewer are known that can be interpreted as intermediates between classes of animals.

Between these examples, a whole host of criteria can be listed to determine significance of fossils such as:

(1) Rareness or uniqueness, (2) preservation of type localities so new specimens can be collected as technology and theory changes, (3) preservation of soft parts, (4) specimens that add information to paleobiographic or biostratigraphic distributions, (5) specimens that provide insights into paleoecology and taphonomy, (6) localities that show exceptional preservation such as Burgess Pass, Stewart Valley, Mazon Creek, Dinosaur National Monument, and so on.

The major key to the assessment of the scientific significnace of a fossil, is the specimen's use in making interpretations, deductions, and developing new theory or influencing established theory. A specimen that stresses or alters theory is worth considerably more than hundreds of specimens that have little or no impact on theory. A specimen that has been in a museum drawer for 100 years can have as much, or more, impact on theory than a newly discovered specimen. Impact can be at any level of theory--- discovery of a unique specimen, discovery of a new specimen of a rare species, finding of soft parts of an extinct group, extensions of stratigraphic or geographic range, discovery of ... (with example). Specimens that impact at the higher levels of theory have more scientific significance than those that impact at lower levels.

The ability to judge impact on theory requires training, and the chance to continue to study fossils and develop new interpretations. It takes a trained paleontologist to do this. It may be possible to interest the various professional paleontological societies of the Nation to develop a scheme whereby the expertise of their membership can be used to establish significance when government or industry does not have the necessary on board expertise to do the job.

Senator **Domenici**. Senator Bingaman, do you have anything further from this panel?

Senator **Bingaman**. I think that's fine.

Senator **Domenici**. Any of you have any closing comments? If you don't, we are finished here and we would like one of you to stay around here.

Dr. **Bawden**. Just in finishing, I would just like to say again that I think a formal relationship, formally structured between the museum and in terms of the museum and the Federal Government is absolutely necessary. We do have some parties working already. Something that hasn't been brought up here, yet, of course, although it's implicit, is the fact of the divergent interests that have to be accepted that we, as academics by and large for running museums have somewhat different goals for these collections, the types of things we want to do with them than does the land managers and correctly so. There is, in fact, a large area of overlap, I think, that has to be worked out and the collaboration which Mr. Thompson has talked about can grow from that collaboration. It is something that has to be developed further than it has been to bring these interests together.

Senator **Domenici**. Let me say for myself so that you won't have any misgivings, I think it's worth your while to continue to beat on us on the curation problem. I mean, frankly, the way the Congress works, it just doesn't necessarily work logically. It doesn't even work in a timely manner and occasionally, it works in very strange ways. Sometimes you will finally impress one Senator with your cause and it might do more than if you went to 50 hearings. Conversely, hearings frequently succeed in their goals just quite timely and in a rather efficient manner.

I am impressed with the notion that we are out there doing all this activity and gathering up all these things. But frankly, pretty soon we are going to have an argument from someone, I assure you, that we ought not to be spending all that money out there because they are going to have pretty good proof that it isn't doing much good inside because we are not taking care of it. Frankly, I could make a pretty good case for that already, I think. I won't do it, but I think that's rather dangerous, especially in the year of tight budgets. I think we ought to move to the problem of solving and helping this curation and the problem of holding onto and documenting for reference and being able to use these things we are working on. Otherwise, it seems to me, to be a very, very dangerous problem, in terms of the program.

Senator **Bingaman**. I have nothing else. Thank you.

Dr. **Thompson**. If there's anything we archeologists have learned in the last 25 years it's a good thing for us as citizens to pound on your ears. We have found that it works very well, and we are grateful for the excellent response that we have had over the years and we continue to keep coming back to you.

Senator **Domenici**. My ears are beginning to look like wrestler's ears, but I think that's correct. We are going to take a 15-minute recess. The reporter needs a little time and all of us do. The Federal panelists and land managing panelists will be up here when we come back.

[Recess was taken.]

Senator Domenici. We are going to get started here. Let me make an observation about the hearings and see if this might work. We are now going back to panel No. 1, and then we have three panels remaining, and they are not large in numbers, so I would hope that everyone would understand that we might very well not break for lunch so don't leave. If it seems like we could finish by 12:30 p.m. or so, we might opt to just finish instead of breaking and coming back at one. A number of people have indicated that that would be helpful, especially those people who are baseball fans and we might try that. Let's proceed now with the panel that's here.

Dr. Keel here? Robert Kerr, Southwest Regional Director of the National Parks Service, and Charles Luscher, New Mexico State Director of the Bureau of Land Management, and William Allan, environmental protection specialist, Bureau of Indian Affairs Office and Sotero Muniz, regional forester, southwest region. Dennis Stanford, western archeologist, Smithsonian Institution. Let's proceed.

Dr. Keel, why don't you start, and let's try and follow the rules as we set them and we will be a little bit liberal and generous with them but let's try to stick by them.

STATEMENT OF DR. BENNIE KEEL, ASSISTANT DIRECTOR FOR ARCHEOLOGY, NATIONAL PARK SERVICE, DEPARTMENT OF THE INTERIOR

Dr. Keel. Thank you, Senator Bingaman and Senator Domenici and ladies and gentlemen, I am pleased to have this opportunity to appear before you to discuss the important issues concerning the protection of archeological and related resources on Federal and Indian land. Of the issues listed in your letters of September 23 to Secretary Hodel and Director Mott, I will be addressing the problems of protection, enforcement, and management, as well as the curation of resources.

The American public has repeatedly supported legislation to protect archeological resources from unnecessary damage and from use of these resources in ways which will not be of general public benefit. Federal agencies, therefore, must consider the effects of their actions on our archeological properties and must protect those properties from various illicit uses. The latter is a particularly difficult problem because of the number of archeological resources on Federal and Indian lands, the remoteness and isolation of many of the specific properties and the limited resources which we have to address the problem. The problem is aggravated by the increasing commercial value of many artifact types, and the concommitment increase in violations by individuals who are engaged in activities purely for commercial gain.

The Archeological Resources Protection Act of 1979 is a very important tool in the protection of such resources on Federal and Indian lands. As yet, a relatively small number of cases have been adjudicated, as many agencies were reluctant to prosecute under the act until the uniform regulations were promulgated. This was done last year. The regulations clearly specified what types of resources were to be protected. The limited experience of the last year-and-a-half suggests that violators of the act are being successfully prosecuted. As we gain more experience with the act, I anticipate that our track record will improve. If agencies pursue violators vigorously, we will see beneficial impacts on the resources we are trying to protect.

Several problems can be identified which could adversely impact agencies' efforts to protect these resources. First, some segments of the public do not have an adequate appreciation of these resources and of the importance of protecting them for the benefit of future generations. The Secretary of the Interior intends to initiate a major public education effort to encourage the general population to appreciate these and other publicly owned resources.

Second, we have not been able yet to accumulate accurate data on the extent of the problem. The National Park Service's automated archeological data base will, in the next couple of years, begin to accumulate this type of information. This will certainly assist Federal agencies in their attempts to address the problem. However, given the extent of the problem, the acres and numbers of resources involved and the remoteness and isolation of many archeological sites, it appears unlikely we will be able to accumulate complete and adequate data in the immediate future on the extent of this problem.

Third, many violators operate across a wide area, vandalizing sites and stealing artifacts from a variety of Federal and Indian lands. Thus, successful law enforcement efforts depend on interagency cooperation, involving not only Federal agencies but State and local personnel as well. Many administrative problems need to be resolved for this process to work well. The National Parks Service, in cooperation with the Forest Service, is initiating the development of an automated data base for investigative purposes. Eventually, other agencies will be invited to participate in sharing information that will help us all enforce this act.

In conclusion, I believe that the Archeological Resources Protection Act is and will continue to be an important tool in protecting archeological resources on public and Indian lands. Although many problems remain to be resolved, I believe that the Federal agencies are moving in the right direction, educating the public about the act and about its importance, the importance of resources that it protects and are expending more and improving the successful efforts in protecting such resources.

Although agencies must find some means of dealing with the problems facing adequate enforcement of the act and because there will always be individuals who will damage and steal publicly owned resources for personal gain, nevertheless, I believe that with cooperation among all concerned agencies and with a well-designed public education campaign we will be able to reduce the incidence of violations significantly and improve the protection of these important resources.

In enacting the Archeological Resources Preservation Act and the 1980 amendments to the Historic Preservation Act, the Congress instructed the Secretary of the Interior to promulgate regulations to ensure that significant prehistoric and historic artifacts and associated records recovered in connection with Federal activities were adequately cared for. In 1984, the National Park Service established a working group of curators, conservators, archeologists, program managers representing the Smithsonian Institution and land managing agencies in the Department of the Interior to advise the National Park Service in drafting the regulations. The regulations will address the following major topics: management policies; custody of collections; accountability of collections; conservation in the field and in the repositories; storage and security; access for educational and scholarly purposes, as well as restrictions on sensitive items; the disposition of collections including loans and deaccessioning; special requirements under the Archeological Resources Protection Act; periodic inspections and reports; and sources of and methods for funding curatorial costs.

I believe that many of the concerns regarding curation that have been expressed today will be adequately dealt with in these regulations. One of our goals this fiscal year is to issue for public comment the draft rules for curation of the federally owned archeological collection. One other thing I would like to make you aware of, last week Secretary Hodel, through a memorandum, recommitted the Department to fulfilling its historic preservation responsibilities and especially those related to archeology under a variety of pieces of legislation. And I think one of the principal—and I am modest and embarrassed to say this—things that this memorandum speaks about is the role of the Department's consulting archeologist.

It is clear for the first time that the Secretary has told the Assistant Secretaries that there will be one person in the Department of the Interior to provide a final level of professional advice to the Assistant Secretaries in carrying out all of these responsibilities, and it goes on to outline a number of areas on which I will be working with the Assistant Secretaries in improving the Department's programs. I think that some of the questions and some of the comments we have heard from some of the previous panels in regard to the lack of central authority—a central brotherhood, someone who has the status and the position to carry out some of the requirements that are already in the law—we have now solved. I am looking forward to working with the Assistant Secretaries across the Department to improve our archeological program as it relates to protection, as it relates to the archeological investigations in terms of data recovery, and certainly as it relates to the curation problem.

Today, as you noticed, we have the Regional Director, Mr. Robert Kerr from the National Park Service southwest region who does not have a statement but certainly is available at the appropriate time to answer any questions you might have in regard to the local situation in carrying out this program. I will certainly be available to answer any questions of a broader nature for the Department. Thank you very much.

[The prepared statement of Dr. Keel follows:]

Testimony of
Dr. Bennie Keel
Departmental Consulting Archeologist
National Park Service
before the
Public Lands, Reserved Water and Resource Conservation Subcommittee
of the
Senate Committee on Energy and Natural Resources
October 14, 1985
Albuquerque, NM

Mr. Chairman, I am pleased to have this opportunity to appear before you to discuss the important issues concerning the protection of archeological and related resources on Federal and Indian lands.

Of the issues listed in your letters of September 23 to Secretary Hodel and Director Mott, I will be addressing the problems of protection, enforcement and management, as well as curation of recovered resources.

The American public has repeatedly supported legislation to protect archeological resources from unnecessary damage, and from use of these resources in ways which will not be of general public benefit. Federal agencies must therefore consider the effects of their actions on archeological properties, and must protect them from various illicit uses. The latter is a particularly difficult problem, because of the numbers of archeological resources on Federal and Indian lands, the remoteness and isolation of many of the specific properties, and the limited resources which we have to address the problem. The problem is aggravated by the increasing commercial value of many artifact types, and the concommitent increase in violations by individuals who engage in this activity for commercial gain.

The Archaeological Resources Protection Act of 1979 is a very important tool in the protection of such resources on Federal and Indian lands. As yet, a relatively small number of cases have been ajudicated, as many agencies were reluctant to prosecute under the Act until the uniform regulations, promulgated in February of 1984, clearly specified what types of resources were protected. The limited experience of the last year and a half suggests that violators of the Act can be and are being successfully prosecuted. As we gain more experience with this Act, I anticipate that our track record will improve. If agencies pursue violators vigorously, we will see beneficial impacts on the resources we are trying to protect.

Several problems can be identified which adversely impact Federal agencies' efforts to protect these resources. First, some segments of the public do not have an adequate appreciation of these resources, and of the importance of protecting them for the benefit of future generations. The Secretary intends to initiate a major public education effort to encourage the general population to appreciate these and other publically owned resources which will assist Federal agencies in protecting them.

Second, we have not yet been able to accumulate accurate data on the extent of the problem. The National Park Service's automated archeological data base will, in the next couple of years, begin to accumulate this type of information. This will certainly assist Federal agencies in their attempts to address the problem. However, given the esxtent of the problem, the acres and number of properties involved, and the remoteness and isolation of many archeological properties, it appears unlikely that we will be able to accumulate complete and accurate data in the immediate future on the extent of this problem.

Third, many violators operate across a wide area, vandalizing sites and stealing artifacts from a variety of Federal and Indian lands. Thus, successful law enforcement efforts depend on interagency cooperation, involving not only Federal agencies but State and local personnel as well. Many administrative problems need to be resolved for this process to work well. The National Park Service, in cooperation with the Forest Service, is initiating the development of an automated data base for investigative purposes. Eventually, other agencies will be invited to participate in sharing information that will help us all enforce this Act.

In conclusion, I believe that the Archaeological Resources Protection Act is, and will continue to be, an important tool in protecting archeological resources on public and Indian lands. Although many problems remain to be resolved, I believe that Federal agencies are moving in the right direction, educating the public about this Act and about the importance of there sources it protects, and are expending more and increasingly successful efforts on protecting such resources. Although agencies must find some means of dealing with the logistic problems facing adequate enforcement of this Act, and because there will always be individuals who will damage and steal publicly owned resources for personnel gain, nevertheless I believe that, with cooperation among all concerned agencies and with a well designed public education campaign, we will be able to reduce the incidence of violations significantly and improve the protection of these important resources.

In enacting the Archaeological Resources Protection Act and the 1980 amendments to the National Historic Preservation Act, the Congress instructed the Secretary of the Interior to promulgate regulations that ensure that significant prehistoric and historic artifacts and associated records recovered in connection with Federal activities are adequately cared for. In 1984 the National Park Service established a working group of curators, conservators, archeologists and program managers representing the Smithsonian Institution and land managing agencies in the Department of the Interior to advise the Service in drafting the regulations. The regulations will address the following major topics: management policies; custody of collections; accountability and registration of collections; conservation in the field and in the repository; storage and security; access for educational and scholarly purposes as well as restrictions on sensitive items; disposition of collections, including loans and deaccessioning; special requirements under the Archaeological Resources Protection Act; periodic inspections and reports; and sources of and methods for funding curatorial costs. One of our goals this fiscal year is to issue for public comment draft rules for the curation of federally owned archeological collections.

Senator DOMENICI. Thank you. Before we move on, I might ask now, Dr. Keel, in terms of that secretarial order and the efforts you have just described to come up with a uniform set of regulations, do I understand that that order and that effort will be applied across the Department of the Interior?

Dr. KEEL. Yes, sir.

Senator DOMENICI. Not just to the Park Service?

Dr. KEEL. That is correct.

Senator DOMENICI. So that BLM comes within it?

Dr. KEEL. Yes, sir.

Senator DOMENICI. How about the Forest Service since they are not under the Department of the Interior, how is that going to be handled?

Dr. KEEL. Our intention, Senator, as we develop a program that we feel is responsive to the legislative requirements and, of course, to a variety of other concerns by other constituent groups, forest development, energy development, and so on and so forth, that as we develop a program that fits these concerns, we will continue to work with both the Forest Service, the Department of Defense, HUD, TVA, etcetera to bring their programs into line. We hope that we are going to be able to make the improvements across the Federal Government—the executive branch—through the Secretary really getting out in front in a leadership attitude on this particular issue.

Senator DOMENICI. I have some more to say about that shortly and we will talk about the Chaco area, at least I will, with Dr. Kerr. Shall we go on with the State Director of the Bureau of Land Management, please.

STATEMENT OF CHARLES W. LUSCHER, DIRECTOR, NEW MEXICO STATE OFFICE, BUREAU OF LAND MANAGEMENT, DEPARTMENT OF THE INTERIOR

Mr. LUSCHER. Thank you. It is a pleasure to appear before the committee today to discuss the Bureau of Land Management's archeological and paleontological programs. 341 million acres of public lands that are managed by the BLM contain a wide variety of prehistoric and historic artifacts, including approximately 110,000 identified archeological and historic sites. During the last year, approximately 1,500 new cultural resource sites were identified in New Mexico alone.

Many of the archeological sites on BLM's public lands are located in the Four Corners area of northwest New Mexico, northeast Arizona, southwest Colorado, and southeast Utah. Current projections of site density in the Four Corners area indicate that some areas probably contain as many as 100 important sites per square mile.

Over the years, BLM has been an active partner with other Federal and State agencies in the exploration, stabilization, and management of the important archeological sites. I will discuss some of the more important projects that BLM has initiated or participated in. One is the Chaco Roads study. This is a program that emphasized the need to consider the historic importance of Chacoan roads in developing BLM's land use policies.

Another program involves the Chaco archeological site management plans. Title V of Public Law 96-550 established the Chaco Culture National Historic Park. Section 502(b) of that act designated 33 sites lying outside of that park as Chaco culture archeological protection sites. Eleven of these outliers are administered by BLM.

To date, BLM's New Mexico State office has completed management plans for the Kin Nizhone, Twin Angels, and Casamero sites. To the best of our knowledge, these are the only plans that have been completed by any Federal or State agency.

BLM is also carrying out stabilization efforts. From 1973 to 1985, BLM's New Mexico State office stabilized and documented 46 historic and prehistoric archeological sites. These include 9 Anasazi sites, 12 Navajo refuge sites, 1 historic homestead, and 1 historic observatory. Fort Craig has recently been completed. The protection team recorded, developed action plans for, and drafted reports on 23 other historic and prehistoric sites and others.

BLM is constructing the Anasazi Heritage Center, and construction is nearing completion at that new facility, which is located at the site of the 12th century Dominguez and Escalante Anasazi ruins near Dolores, CO. The center will be a major curatorial facility and public museum, housing more than a million artifacts and other archeological specimens. Located on BLM land, the center will be operated by BLM.

BLM has also been a primary participant in the development of a number of interagency agreements. BLM offices in New Mexico, Utah, Arizona, and Colorado devote a portion of their management to patrol and enforcement and work to reduce vandalism activities. Unfortunately, these efforts will never be enough to totally prevent theft and vandalism.

Public awareness of the seriousness of the problem and more emphasis on eliminating illegal markets which encourage vandalism seem to offer the most realistic solutions. Recently, some potentially important headway has been made. First, we are taking some positive steps to deal with the on-the-ground problem. These steps include the purchase of electronic surveillance equipment and an increase in helicopter patrols over the most critical areas. BLM-wide reassignment of law enforcement personnel has strengthened our ability to respond to specific situations.

A second thrust has been directed at educating the general public as to the seriousness of the issue. There are indications that both these efforts have had some effect.

The lands managed by BLM provide the public many recreational opportunities associated with paleontological resources. In addition, BLM manages and protects several paleontological sites specifically for their scientific values. Examples of these areas are the Cleveland-Lloyd Dinosaur Quarry in Utah and the Stewart Valley Fossil Site in Nevada.

The Cleveland-Lloyd Dinosaur Quarry has produced scientific information since it was first worked by University of Utah field crews in 1928. The Stewart Valley site is considered to be one of the most important invertebrate Miocene-age fossil localities in the world.

The Fossil Forest is another important paleontological area located on BLM lands. The San Juan Basin Wilderness Act of 1984 established the Bisti Wilderness and De-na-zin Wilderness, both of which are located approximately 15 miles northwest of the Chaco National Historic Park. Just south of the De-na-zin Wilderness lies the Fossil Forest, which was discovered in 1977. A BLM-sponsored inventory of the paleontological resources in the San Juan Basin described the Fossil Forest as an area of great paleontological significance which should be preserved, intact, for future research.

Large numbers of petrified logs and stumps are associated with numerous dinosaur, fish and mammal bones, and mollusk beds. This is one of the few places in the world where the interrelationships and ecology of most components of the Late Cretaceous biological community may be studied in a restricted area.

No activities are permitted in the Fossil Forest which would either significantly disturb the land surface or impair the scientific research values. Management efforts taken by BLM in this regard include the development of regulations for the fossil forest, scheduled for publication and final form on October 30 of this year, and initiation of the fossil forest long-range study and the interim management plan.

BLM has been involved in the development of a memorandum of understanding between the State of New Mexico, the Federal Government and representatives of the coal industry, and the recent meeting in Farmington between BLM and the National Academy of Science' paleontologists, which was held to discuss paleontological permitting and the methods to be used to conduct research in wilderness areas and the development of a paleontological permit program.

The Department of the Interior is proud of the prehistoric and historic artifacts that are found on public lands. Secretary Hodel is keenly aware of the effect that vandalism and theft have on our archeological and paleontological sites, and has taken a personal interest in our efforts to halt such activities.

We believe that these abuses occur because some people perceive that our resources, as public property, may be taken and used without the personal management obligations that most of us apply to our personal property. The educational and public awareness programs that the Department is in the process of implementing, based on Secretary Hodel's initiative, are intended to change that perception by making each American proud of our national parks, refuges and public lands and by encouraging each of us to accept the responsibilities for personally caring for and protecting these areas. Thank you.

[The prepared statement of Mr. Luscher follows:]

Statement of Charles W. Luscher, Director, New Mexico State Office, Bureau of Land Management, Department of the Interior, before the Subcommittee on Public Lands, Reserved Water and Resource Conservation, Committee on Energy and Natural Resources, United States Senate, on the Management, Protection and Preservation of Archaeological and Paleontological Resources.

It is a pleasure to appear before the subcommittee today to discuss the Bureau of Land Management's (BLM) archaeological and paleontological programs.

The 341,000,000 acres of public lands that are managed by BLM contain a wide variety of prehistoric and historic artifacts, including approximately 110,000 identified archaeological and historic sites. New sites are being identified almost daily. During the last year, approximately 1,500 new cultural resource sites were identified in New Mexico alone. In addition, several important paleontological sites are located on the public lands. The scope of this statement does not allow a comprehensive review of all of BLM's archaeological and paleontological programs. However, I will present a representative picture of BLM's protection efforts, focusing primarily on our programs in New Mexico.

Many of the archaeological sites on BLM's public lands are located in the "Four Corners Area" of northwest New Mexico, northeast Arizona, southwest Colorado and southeast Utah. Current projections of site density in the Four Corners Area indicate that some areas probably contain as many as 100 important sites per square mile.

The complex land management patterns that exist in the San Juan Basin and elsewhere, together with the widely dispersed locations of significant archaeological sites, require all of the involved Governmental agencies and institutions, as well as private owners and citizen users, to cooperate in the management, preservation and protection of the sites. Over the last decade, BLM has been an active partner with other Federal and State agencies in the exploration, stabilization and management of important archaeological sites. The following are some of the more important projects that BLM has initiated or participated in, starting with those in New Mexico.

The Chaco Roads Study. This is a program that emphasized the need to consider the historical importance of Chacoan roads in developing BLM's land use policies. Research that was conducted as part of the study was directed toward several goals, including the development of a more explicit and consistent system for classifying roads, a methodology for testing the validity of roads as prehistoric features and a structure for understanding the information potential of road associated sites and features that are not part of another community.

Chaco Archaeological Site Management Plans. Title V of Public Law 96-550, of December 19, 1980, established the Chaco Culture National Historic Park. Section 502(b) of that Act designated 33 sites lying outside of that Park as "Chaco Culture Archeological Protection Sites." Eleven of these "outliers" are administered by BLM.

To date, BLM's New Mexico State Office has completed management plans for the Kin Nizhone, Twin Angels and Casamero sites. To the best of our knowledge, these are the only plans that have been completed by any Federal or State agency.

Stabilization Efforts. From 1973 to 1985, BLM's New Mexico State Office stabilized and documented 46 historic and prehistoric archaeological sites. These included 9 Anasari sites (800-1400 A.D.), 12 Navajo refuge sites (1770-1775 A.D.), 1 historic homestead (1920) and 1 historic observatory (1920) in Arizona. Stabilization efforts at the Teypama Ruins and Ft. Craig have recently been completed. In addition to the actual stone and mortar work that is involved in the stabilization of sites, the protection team recorded, developed action plans for, and drafted reports on, 23 other historic and prehistoric sites. One of the action plans, the Ft. Craig Cultural Resource Management Plan is presently being implemented.

The Anasazi Heritage Center. Construction is nearing completion at this new facility which is located at the site of the 12the Century Dominguez and Escalante Anasazi ruins, near Dolores, Colorado, within the Four Corners Area. The Center will be a major curatorial facility and public museum, housing more than a million artifacts and other archaeological specimens recovered as part of the massive Dolores-McPhee Dam and Reservior Project. Located on BLM land, the Center is being constructed by the Bureau of Reclamation and will be operated by BLM. The Center's location, design and operation are aimed at maintaining and interpreting artifacts near their place of origin for maximum public and scholarly benefits.

James Creek Shelter Archaeological Project This is a recently completed joint effort by BLM and the Carlin Gold Mining Company of Nevada to salvage unique archaeological materials imperiled by mine expansion activities. The site is a rock shelter containing a limited area of dry deposits. The normally perishable artifacts and other prehistoric materials that were recovered at the site are thought to represent several thousand years of periodic human activity at the shelter. Field work was completed under the guidance of an archaeological consulting firm contracted by the mining company with most of the labor being contributed by BLM archaeologists and volunteers from nearby universities and communities.

BLM has also been a primary participant in the development of a number of interagency agreements with the National Park Service (NPS), the Bureau of Indian Affairs (BIA), the U.S. Forest Service and the New Mexico State Historic Preservation Officer. In particular, BLM's New Mexico State Office has played a pivotal role in the activities of the organization responsible for implementing Title V of Public Law 96-550, the "Chaco Culture Interagency Management Group," which is comprised of BLM, BIA and NPS.

The Interagency Management Group published its Joint Management Plan in July 1983. the plan established guidelines for the identification, preservation, protection , research, management and use of Chaco outliers.

Undoubtedly the most pressing management problem facing the involved agencies is the vandalism of valuable archaeological sites. It is not uncommon for well preserved pots and baskets to bring thousands of dollars on the black market. As a result, the removal of artifacts by unscrupulous or uninformed diggers is a tempting activity. BLM's offices in New Mexico, Utah, Arizona and Colorado regularly devote a considerable portion of their management efforts to conducting patrol and enforcement work to reduce such activities.

Unfortunately, these efforts, as well as the efforts of the other agencies involved, even on an accelerated basis, will never be enough to totally prevent theft and vandalism. A greater public awareness of the seriousness of the problem and more emphasis on eliminating the illegal markets which encourage vandalism would seem to offer the most realistic solution. Some of the markets for these artifacts include museums, galleries and schools and universities, since tax deductions are available to people who donate artifacts to such institutions. It is not uncommon for legitimate institutions to unknowingly become part of the black market chain.

Recently, some potentially important headway has been made. First, we are taking some positive steps to deal with the on-the-ground problem. These steps include the purchase of electronic surveillance equipment and an increase in helicopter patrols of the most critical areas. A BLM-wide reassignment of law enforcement personnel has strengthened our ability to respond quickly to specific situations. In 1984, the U.S. Attorney for Utah become actively invovled in pursuing the apprehension and prosecution of "pot hunters" and appointed a task force comprised of law enforcement officers from the Four Corners Area. In 1984, former Utah Governor Matheson also appointed a task force comprised of BLM, Forest Service, NPS, State Government and law enforcement agency representatives to formulate both short-term and long-term strategies for dealing with the problem.

A second thrust has been directed at educating the general public as to the seriousness of the issue. We are intensifying our efforts to increase the public's awareness of the importance of these sites and the need to preserve them for the use and enjoyment of future generations. There has also been a significant increase in press coverage of the issue.

There are indications that both of these efforts have had some effect. While vandalism and looting are still taking place, preliminary evidence indicates that the amount of such activity has not increased over the last year.

The lands managed by BLM provide the public many recreational opportunities associated with paleontological resources. In addition, BLM manages and protects several paleontological sites specifically for their scientific values. Examples of these areas are the Cleveland-Lloyd Dinosaur Quarry in Utah and the Stewart Valley Fossil Site in Nevada.

The Cleveland-Lloyd Dinosaur Quarry has produced significant scientific information since it was first worked by University of Utah field crews in 1928. In addition to its scientific contributions, the quarry also provides the public interpretive displays at the visitor center and an opportunity to view paleontologists at work. The Stewart Valley site is considered to be one of the most important invertebrate Miocene age fossil localities in the world. Unusually well preserved fossil insects and plants and associated vertebrate fossils at the site provide paleontologists a unique opportunity for evolutionary and paleoenvironmental studies.

The Fossil Forest in New Mexico is another important paleontological area that occurs on BLM lands. The San Juan Basin Wilderness Act of 1984 established the Bisti Wilderness and the De-na-zin Wilderness, both of which are located approximately 15 miles northwest of the Chaco Culture National Historic Park. Just south of the De-na-zin Wilderness lies the Fossil Forest, which was "discovered" in 1977. Since that time, BLM and various State agencies have conducted a number of studies of the area. A BLM sponsored inventory of the paleontological resources in the San Juan Basin described the Fossil Forest as an area of great paleontological significance which should be preserved intact for future research. Large numbers of petrified logs and stumps are associated with numerous dinosaur, fish and mammal bones and mollusk beds. This is one of the few places in the world where the interrelationships and ecology of most components of the Late Cretaceous biological communities may be studied in a restricted area.

Section 103 of the San Juan Basin Wilderness Act established specific management criteria for the Fossil Forest. In accordance with that Act, no activities are permitted in the Fossil Forest which would either significantly disturb the land surface or impair the area's natural, educational and scientific research values. Management efforts that have been taken by BLM in this regard include:

- The development of regulations for the Fossil Forest, scheduled for publication in final form on October 30, 1985. The proposed rules are intended to deter vandalism and unauthorized use of the fossils, ensure that only authorized professionals may conduct paleontological research and collect from the area, and provide ground rules for the curation of specimens. Violators of these regulations would be subject to apprehension and prosecution.

- The initiation of the Fossil Forest Long-Range Study and Interim Management Plan.

- The development of a Memorandum of Understanding among the State of New Mexico, the Federal Government and representatives of the coal industry, which provides for inventories, evaluations and the salvage of significant fossils on lands outside of the Fossil Forest that are open to Federal coal leasing.

- The recent meeting in Farmington between BLM and National Academy of Sciences' paleontologists, which was held to discuss paleontological permitting and the methods to be used to conduct paleontological research in wilderness areas.

- The development of a paleontological Permit Program, through which BLM's New Mexico State Office reviewed and approved four permits for paleontological research during the last year. None of the permits concerned wilderness areas, but two were in wilderness study areas.

While the destruction or vandalism of paleontological sites is not yet a significant problem for BLM, there have been several instances where fossils have been removed from sites and not returned. Nonetheless, the paleontological community is concerned that the increased publicity concerning fossil areas and the value of fossils to museums and educational institutions may subject these resources to the same crimes as are committed against archaeological resources. Our emphasis in this area, as in the area of archeological resources is on more active patrolling of sensitive areas, in addition to taking measures that will create public awareness and cooperation.

The Department of the Interior is proud of the prehistoric and historic artifacts that are found on the public lands. Secretary Hodel is keenly aware of the threat that vandalism and theft are to our archeological and paleontological sites and has taken a personal interest in our efforts to halt such activities.

We believe that these abuses occur because some people perceive that our resources, as "public property" may be "taken" and "used" without the personal management obligations that most of us apply to our personal property. The educational and public awareness programs that the Department is in the process of implementing based on Secretary Hodel's initiative are intended to change that perception by making each American proud of our national parks, refuges and public lands and encouraging each of us to accept the responsibility for personally caring for and protecting these areas.

This concludes my statement. I will be please to respond to any questions on this subject.

Senator DOMENICI. Thank you very much. William C. Allan, environmental protection specialist from the Bureau of Indian Affairs, Albuquerque area.

STATEMENT OF WILLIAM C. ALLAN, ENVIRONMENTAL PROTECTION SPECIALIST, BUREAU OF INDIAN AFFAIRS, ALBUQUERQUE AREA OFFICE, DEPARTMENT OF THE INTERIOR

Mr. ALLAN. Senator Domenici, Senator Bingaman, I am pleased to be here today to discuss the Bureau of Indian Affairs' role in regard to the protection of archeological resources on lands under its jurisdiction in the State of New Mexico. To save time, I would like to summarize some of the difficulties outlined in my full statement.

First of all, archeological sites are often part of the religious and spiritual belief systems of American Indians. Although the Archeological Resources Protection Act recognizes Indian landowners' proprietary interest in archeological sites on Indian lands, the Indian landowners are outsiders to the site protection process under NHPA. At any rate, the required involvement of the State historic preservation officer in the compliance process creates difficulties with many Indian tribes. Historically, tribes and States have engaged in serious governmental conflicts over jurisdiction in power.

Finally, the Archeological Resources Protection Act gives Indian landowners veto power over archeological investigations on Indian lands. The Federal actions requiring compliance with the National Historic Preservation Act involve archeological investigations, and if tribes, for religious privacy or any other reason, do not want the investigations to take place, then the Federal agencies must either cancel the project or satisfy the National Historic Preservation Act on minimal resource knowledge. This essentially concludes my prepared remarks. Thank you very much.

[The prepared statement of Mr. Allan follows:]

STATEMENT OF WILLIAM C. ALLAN, ENVIRONMENTAL PROTECTION SPECIALIST ALBUQUERQUE AREA OFFICE, BUREAU OF INDIAN AFFAIRS, U.S. DEPARTMENT OF THE INTERIOR, BEFORE THE UNITED STATES SENATE ENERGY AND NATURAL RESOURCES SUBCOMMITTEE ON PUBLIC LANDS AND RESERVED WATER FIELD HEARING ON THE ARCHEOLOGICAL RESOURCES PROTECTION ACT AT ALBUQUERQUE, NEW MEXICO.

October 14, 1985

Mr. Chairman and Members of the Committee, I am pleased to be here today to discuss the Bureau of Indian Affairs' (BIA) role in regard to the protection of archeological resources on lands under its jurisdiction in the State of New Mexico.

The Albuquerque Area Office, Bureau of Indian Affairs, administers approximately 4.3 million acres of Indian lands belonging to 24 Indian tribes in the States of New Mexico, Colorado, and Utah. The term "Indian lands" refers to lands of Indian tribes, or Indian individuals, which are either held in trust by the United States or subject to a restriction against alienation imposed by the United States. As the trustee, the United States is responsible for overall management of these lands. Carrying out these responsibilities involves many types of Federal actions, which in turn must be in compliance with the various Federal historic preservation laws. The Bureau of Indian Affairs, acting as the principle trustee, has the responsibility to comply with these statutes.

Presently, there is one professional archeologist on the Albuquerque Area Office staff to manage, protect, and preserve archeological and paleontological resources on Indian land in New Mexico, Colorado, and Utah. Under the Antiquities Act of 1906 and the Archeological Resources Protection Act of 1979 (ARPA), the BIA is charged with the protection of archeological and paleontological resources from vandalism, looting, and theft, and the permitting of legitimate scientific investigations. Because Indian lands are private lands with controlled access, it is generally difficult for looters and vandals to enter onto Indian lands. By comparison to public lands which are open to access, looting and vandalism has been a relatively minor problem in the Albuquerque Area jurisdiction. However, it is my understanding that under the jurisdiction of our Navajo Area which is located in Arizona, there are thousands of archeological resource sites located in the State of New Mexico which have suffered some degree of unauthorized and unpermitted damage, looting or vandalism. Although evidence of looting activity is occasionally discovered and investigated in the Albuquerque Area jurisdiction, no prosecutions have occurred since the passage of ARPA. All legal and law enforcement activities are handled by the United States Attorney's Office and BIA or tribal law enforcement officials. The Area Archeologist may provide expert witness testimony, assess damage to archeological sites, and serve as an advisor or assistant in the identification of vandalized sites and the collection of evidence. The Area Archeologist also handles the administrative aspects of the issuance of non-collection survey authorizations, and permits under the authority of the Antiquities Act and the Archeological Resources Protection Act.

The Area Archeologist conducts archeological surveys for Bureau sponsored projects and is responsible for completing consultation procedures for all actions which require compliance with Section 106 of the National Historic Preservation Act (NHPA). The Bureau does not have its own process for compliance with NHPA, but receives its guidance from existing regulations. Approximately 250 compliance actions are completed each fiscal year with approximately 45 of these requiring field surveys by the Area Archeologist.

With regard to the special status of Indian lands some of the difficulties are:

1. Archeological sites often are part of the religious/spiritual belief systems of American Indians. In that light, any disturbance of sites, or even knowledge about them can act as a desecration of the sites and an affront to traditional Indian religion. The historic preservation program established by NHPA, with its required public involvement,

professional surveys, recordkeeping, and consultation with other governmental entities, inherently conflicts with some tribal religions.

2. The current regulations have no formal role for Indian tribes. Although the Archeological Resources Protection Act recognizes the Indian landowners' proprietary interest in archeological sites on Indian lands, the Indian landowners are outsiders to the site protection process under NHPA. This inconsistency becomes glaring in light of the inherent sovereignty of Indian tribes and the policy of the Federal Government that tribes take an increasing role in managing their own resources. Consequently, Indian tribes have expressed the opinion that the entire NHPA program violates tribal sovereignty and the spirit of Indian self-determination.

3. The required involvement of the State Historic Preservation Officer (SHPO) in the NHPA process creates difficulties with many Indian tribes. Historically, tribes and States have engaged in serious governmental conflicts over jurisdiction and power. Therefore, tribes view SHPO consultation over the importance and disposition of tribal cultural resources as an infringement of their sovereignty, and as assertion of State jurisdiction over Indian lands.

4. ARPA gives Indian landowners veto power over archeological investigations on Indian lands. If Federal actions, requiring compliance with NHPA, involve archeological investigations and if tribes, for religious, privacy, or any reason, do not want the investigations to take place; then the Federal agency must either cancel the project or satisfy the NHPA with minimal resource knowledge.

This concludes my prepared statement. Thank you for giving us the opportunity to address this subject. I will now be happy to answer any questions you may have.

Senator DOMENICI. Thank you. Sotero Muniz, regional forester. Welcome.

STATEMENT OF SOTERO MUNIZ, REGIONAL FORESTER, SOUTHWEST REGION, FOREST SERVICE, DEPARTMENT OF AGRICULTURE

Mr. MUNIZ. Mr. Chairman, members of the committee, I appreciate this opportunity to discuss the Forest Services' cultural resource management program. After my opening statement I will do my best to answer any questions the committee members may have. I'm also accompanied by Judith Propper, our regional archeologist, and Manuel Martinez, the regional director of law enforcement who are here to assist in responding to questions the committee may have.

Evidence of our Nation's cultural heritage is found in a wide array of cultural resources. Nationwide the Forest Service employs 130 professional archeologists to direct and coordinate cultural resource work on approximately 191 million acres of national forest system lands. Since 1971, we have conducted field surveys on approximately 16 million acres and over 100,000 cultural resource properties have been recorded. Three hundred properties have been placed on the national register of historic places; 56 of those 300 are in the southwestern region.

Most of our inventory work has been directed at identifying and protecting cultural resources prior to land management activities. Some regions, including the southwestern region, have a computerized State inventory data base and are developing a computerized system to track our surveys. Artifacts recovered on cultural resource investigations are curated in museums, in Forest Service offices or by institutions conducting authorized work on the national forests. The remains of the past are fragile and we recognize that.

Of great concern in many parts of the country is the loss of cultural resources due to vandalism, pot hunting, illegal digging, and theft. The Forest Service has been investigating and prosecuting pot hunting cases since the midseventies. Since passage of the Archeological Resources Protection Act in 1979, Forest Service special agents have been directly involved with many convictions under ARPA in several States. In this region, our special agents have been directly involved with 31 convictions under ARPA since its enactment. Operation STOP, a Forest Service-funded, multiagency proactive investigation, focused on those who deal in prehistoric artifacts, as well as those who dig and sell them and thus far has resulted in 18 convictions.

The Forest Service has provided national leadership in developing a training program for cultural resources law enforcement. We have also developed and participated in the development of brochures, posters, and documentaries to increase public awareness of the nature and importance of the cultural resources and the Federal laws protecting them. Although progress has been made, the threat to our cultural heritage does remain. The vastness of our public lands make this task extremely difficult. Continuing cooperative efforts are needed to apprehend and prosecute those who profit from the theft of our Nation's archeological resources.

Now, in addition to law enforcement efforts, interagency cooperation has occurred in many other areas. For example, the Forest Service and the Bureau of Land Management have cooperated in developing a series of cultural resource overviews. We have some inservice experts in paleontology who are utilized when need be, but there has been relatively little activity in this area.

The density and complexity of cultural resources in many parts of this Nation create a difficult management task. In August 1984, two lawsuits involving cultural resources were filed against this region by the State of New Mexico, and by Save the Jemez and others. The plaintiffs allege compliance violations, site damage, and lack of a regional program to locate, nominate, preserve, and protect natural resources. We are evaluating potential settlement opportunities, as well as preparing for a trial on the merits in the spring of 1986. Meanwhile, we are taking and have taken several actions to further strengthen our cultural resource management program in response to the complaints that have been raised in this litigation.

We view the cultural resource management program as a important part of our overall management of the national forests. We are striving to improve both the quality and effectiveness of our program servicewide.

Mr. Chairman, I have addressed some of the major aspects of our cultural resources protection and law enforcement efforts and I am available to respond to any questions you may have.

[The prepared statement of Mr. Muniz follows:]

STATEMENT OF
SOTERO MUNIZ, REGIONAL FORESTER
SOUTHWESTERN REGION
FOREST SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

Before the
Subcommittee on Public Lands, Reserved Water
and Resource Conservation
Committee on Energy and Natural Resources
United States Senate

Concerning Management and Protection of Cultural Resources

October 14, 1985

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

I appreciate this opportunity to discuss the Forest Service's cultural resources management program. I will describe the Forest Service's overall program and, in some instances, localize it to specific activities in the Southwestern Region. My prepared statement deals with several major areas of interest, including our efforts to protect archeological resources from vandalism and theft. After my opening statement, I will do my best to answer any questions the Committee members may have. I am accompanied today by Judith Propper, Regional Archeologist, and Manuel Martinez, Regional Director of Law Enforcement, who are present to assist in responding to technical questions.

OUR CULTURAL HERITAGE

The cultural heritage of this Nation extends many years into the past and is still reflected in distinctive regional cultural traditions, architecture, and foods. Evidence of this heritage is found in a wide array of cultural resources, ranging from the sites of early Indian inhabitants and European settlers to more recent camps of sheepherders, miners, and lumbermen.

FOREST SERVICE CULTURAL RESOURCES MANAGEMENT PROGRAM

Nationwide, the Forest Service employs 130 professional archaeologists to direct and coordinate cultural resources work and to advise land managers on matters involving cultural resources on approximately 191 million acres of National Forest System lands. Since 1971, we have conducted field surveys of approximately 16 million acres of these lands. Over 100,000 cultural resource properties have been recorded from these surveys and from records and overview studies. Three hundred properties have been placed on the National Register of Historic Places, and an additional 9,000 have been determined eligible for listing. Fifty-six of the three hundred properties are in the Southwestern Region. We are proud of the contribution the Forest Service has made and continues to make to the Nation's historic preservation program and to the field of American archaeology.

CULTURAL RESOURCE INVENTORY

Most of our inventory work has been connected with proposed land management activities. Surveys are conducted in advance of recreation or range improvement projects, timber harvest activities, road construction, and other projects. Once located, sites are inventoried and mapped. Sites are then marked for protection, or appropriate mitigating measures are developed in consultation with the State Historic Preservation Officer and the Advisory Council on Historic Preservation to preserve or recover important information from threatened sites.

Some regions, including the Southwestern Region, have a computerized site inventory data base and are developing a computerized system to track surveys and to help in the overall management of this resource. Artifacts recovered from cultural resource investigations are curated in approved museums, in Forest Service offices, or by institutions conducting authorized work on National Forests.

PROTECTION OF CULTURAL RESOURCES FROM VANDALISM AND THEFT

The remains of the past are fragile. Cultural resources can be damaged by erosion and natural deterioration, by land management activities, and inadvertently by visitors. Of great concern in many parts of the country is the loss of cultural resources due to vandalism, pothunting, illegal digging, and theft.

The Forest Service has been investigating and prosecuting pothunting cases since the mid-1970's. Since passage of the Archaeological Resources Protection Act (ARPA) in 1979, Forest Service special agents have been directly involved with many convictions under ARPA in several States. Last year alone, 3,000 citations were issued for violations of cultural resource laws and regulations, and 48 arrests were made in more serious incidents. In this Region, our special agents have been directly involved with 31 convictions under ARPA since its enactment. Operation STOP, a Forest Service-funded, multi-agency Pro-Active investigation, focused on those who deal in prehistoric artifacts as well as on those who dig and sell them and has resulted in 18 convictions.

The Forest Service has provided national leadership in developing a training program for cultural resource law enforcement. Over 300 trainees from various Federal and State agencies attended these Forest Service training courses conducted by personnel from the Southwestern Region.

We have also developed and participated in the development of brochures, posters, and documentaries to increase public awareness of the nature and importance of cultural resources and the Federal laws protecting them. The Forest Service also was instrumental in the development of a training program for law enforcement officers and archeologists offered by the Federal Law Enforcement Training Center.

Although progress has been made, the threat to our cultural heritage remains. The vastness of our public lands makes the task extremely difficult. Continuing efforts are needed to apprehend and prosecute those who profit from the theft of our Nation's archaeological resources. Continued interagency coordination and cooperation are also needed if we want to make a significant impact on pothunting. We also must document, salvage, and repair the damage that has already occurred.

INTERAGENCY COOPERATION

In addition to law enforcement efforts, interagency cooperation has occurred in other areas. For example, the Forest Service and Bureau of Land Management have cooperated in developing a series of cultural resources overviews. Each overview presents a summary of what is known about the prehistory of a large part of a State or Region. The results have been enthusiastically utilized by professionals in both agencies as well as by other archeologists.

PALEONTOLOGICAL RESOURCES

We have some inservice experts in paleontology who are utilized when needed but there has been relatively little activity in this area.

Assistance from other agencies and institutions has been utilized in some cases when paleontological decisions have had to be made.

CULTURAL RESOURCE LITIGATION

The density and complexity of cultural resources in many parts of the Nation create a very difficult management task. In August 1984, two law suits involving cultural resources were filed against the Southwestern Region by the State of New Mexico, Save the Jemez, and others. The plaintiffs allege compliance violations, site damage, and lack of a regional program to locate, nominate, preserve, and protect cultural resources. We are evaluating potential settlement opportunities as well as preparing for a trial on the merits in the spring of 1986. Meanwhile, we are taking actions to further strengthen our cultural resources management program in response to the complaints raised in this litigation.

CONCLUSION

We view the cultural resources management program as an important part of our overall management of the National Forests. We are striving to improve both the quality and effectiveness of our cultural resources management program servicewide including, where appropriate, interpreting these resources for public education and enjoyment.

Mr. Chairman, I have addressed some of the major aspects of our cultural resources protection and law enforcement efforts. I am available to respond to any questions you may have on our programs.

Senator Domenici. Let me just ask one general one right quick. In the development of law enforcement procedures and regulations that were alluded to just a while ago by Dr. Keel, are you working with the other agencies or are you on your own with reference to the development of regulations and law enforcement approach?

Mr. Muniz. The regulations that Dr. Keel mentioned, I believe, are being developed at a national level. I'm not personally aware of any interaction between the Department of Agriculture and Interior at the Washington level.

Senator Domenici. Are you aware of any relationship between the Department of Agriculture and Interior at the national level with reference to the two notions you spoke of? You have somebody now directly in charge.

Dr. Keel. Yes. Senator, the Secretary of the Interior is directed by the amendments to the Historic Preservation Act and the ARPA legislation of 1979 to develop the cultural regulations. Our working group has been composed of resource people from agencies across the Government so there is that kind of interaction going on. And as part of the normal preparation and development procedure, we will be dealing at the next threshold across the Government not only with Agriculture but with Defense, the Tennessee Valley Authority and so on and so forth. The Forest Service falls under the Department of Agriculture.

Senator Domenici. You mentioned they have 130 professional archeologists within the Forest Service. You did not mention the strength of this aspect in the department.

Dr. Keel. The Department of the Interior has about 270 full-time permanent archeologists. The National Park Service has 84 and Bureau of Land Management has about 115, and the remaining 70-odd are distributed in the Fish and Wildlife Service Minerals Management Service, Bureau of Indian Affairs, Office of Surface Mining and Bureau of Reclamation. The archeological expertise within the Department of the Interior is primarily expressed in the National Park Service and in the Bureau of Land Management, the principal land managing agencies.

Senator Domenici. Dr. Dennis Stanford, western archeologist, Smithsonian Institution. Thank you very much for coming, Doctor.

STATEMENT OF DR. DENNIS STANFORD, CURATOR, NORTH AMERICAN ARCHEOLOGY, SMITHSONIAN INSTITUTION

Dr. Stanford. I'm Dennis Stanford, curator of North American Archeology at the Smithsonian Institution. I do not have a prepared statement for you today, as much as I just found out I was to be here last Thursday. So primarily, I'm here to answer questions. I will begin by saying that the Smithsonian has roughly 4 million artifacts in North American archeology of which only 18,000 are from New Mexico and most of these were collected in the early part of the century, and in fact, we have not had a major expedition to New Mexico in 60 years.

Our primary purposes at the Smithsonian now are the curation of exhibits and research. Although we were heavily involved in salvage archeology during the WW II days as well as the river basin surveys, in the present time we have only three curators of North

American archeology and of those three, one is, in fact, working primarily in Canada. I should also like to point out that as a result of our efforts with the river basin survey, which ended in the sixties, that we still continue to accession collections made at that time. So I can well understand the problems that these museums and regional repositories, such as they are, are having with the tremendous influx of archeological artifacts, as well as information at the present time. And I'm very glad we are not dealing with that ourselves.

In terms of our articulation with the Southwest, we primarily make loans in two categories. Loans for exhibit purposes and loans for research. At the current time, we have at least 10, maybe 12 loans in the State of New Mexico, and with that, I will be glad to answer any questions that you have.

Senator Domenici. Thank you very much. Senator Bingaman, I have a number of questions but I would yield to you first. Would you like me to tell Dr. Keel that I think you used the words that you were modestly embarrassed?

Dr. Keel. Modest and embarrassed.

Senator Domenici. I got it wrong. I would have said you should be extremely embarrassed, but in any event—it's not your fault, but in any event, it is very late in the game for the Department of Interior to do what we have done with reference to an archeological focus point within the department and I know of your genuine interest, and I am not at all critical of you. I think it's been extremely difficult to get to the top of that Department with reference to that need for quite awhile. It's very late in coming. At least we have it now, and for that, I am honestly and publicly indicating at least my personal appreciation to you. I think we should have done it awhile back, and clearly, we are not going to get out of the muddle we are in, even with the great resources we are applying, if there isn't some effort made to respond more promptly in that area, and also to the enforcement area.

I want to state generally that I am not terribly impressed with the notion that we need a broad-based educational program. I say if you are going to do that, that's wonderful, but I can't believe the problem is a broad-based educational program with reference to the value of these things. I think that might affect the average citizen who goes out to find arrows and a few things, but I think the big looters know that it's against the law, and I think we have just got to find a better way to catch them and prosecute them. I'm not so sure that spending a lot of money on education is going to have the least bit of impact on them, and if I had the authority, I would have put it into enforcement to the maximum extent rather than education.

Senator Bingaman. Let me just be sure I understand the testimony here. Dr. Keel, ARPA was passed in 1979?

Dr. Keel. Yes, sir.

Senator Bingaman. These amendments to the Historical Preservation Act were passed 1 year later in 1980, and we still don't have any regulations promulgated. Is that what I am led to believe?

Dr. Keel. We have the regulations promulgated for ARPA, sir. They were promulgated in February 1984. They have been in force.

Senator Bingaman. But we didn't yet have the ones for the Historical Preservation Act do we?

Dr. Keel. No, sir. There are a number of regulations relative to the Historic Preservation Act. Among those included are the regulations under section 106 and a whole variety of other regulations in regard to the National Register Program, eligibility in terms that relate to the State-Federal partnership and so on and so forth. We do not have all of the regulations—the curation regulations—promulgated at this time. We are working on those, and we anticipate publishing a draft bill for public comment in the forthcoming months.

Senator Bingaman. You say in your testimony that agencies were reluctant to prosecute. There have been a relatively small number of case have been adjudicated because agencies were reluctant to prosecute under ARPA until we had uniform regulations.

Dr. Keel. That is correct.

Senator Bingaman. And it took us 4 or 5 years to get those after Congress directed that they be adopted. I guess my initial question is that the actions not just of the Department of the Interior, but of the Federal Government in general here would lead me to conclude that there's no sense of urgency perceived by the Federal agencies in getting around to this job of protecting these resources. That whatever looting or vandalism is occurring is not at a significant enough level to cause concern. Is that an accurate impression that I am picking up based on what you have described?

Dr. Keel. Senator, I would have to agree with you at one level or another in terms of the kind of resources that have been available to see the regulations developed, and also, with the changing of administrations at the beginning of this decade and several reorganizations relating to historic preservation programs, archeological acts and so on. For example, the dissolution of the Heritage Conservation Recreation Service, which had that responsibility and was melted back into the National Park Service.

Senator Bingaman. When was that dissolution.

Dr. Keel. In 1981, I believe. It was very early in the President's first administration.

Senator Bingaman. What was the justification for that?

Dr. Keel. The justification for that, as I recollect, sir, was a move toward more efficiency and economy by combining the National Park Service and the Heritage Conservation Recreation Service, which had two components, the broader Federal historic responsibility, as well as the outdoor recreation responsibility. The Administration found, I believe, that it could create more efficiencies and economy by combining these agencies. There were several realignments and reorganizations that took place in the National Park Service in the first couple of years trying to get the personnel and the program and the functions in the appropriate place within the National Park Service.

Senator Bingaman. Mr. Luscher, you say in your testimony here that the BLM-wide reassignment of law enforcement personnel has strengthened our ability to respond quickly to specific situations and there you are talking, as I understand it, about instances of vandalism and looting and all. What is the extent of our ability to respond quickly to specific situations?

Mr. Luscher. Well, it varies a little bit, Senator, between areas. We are in the process now in New Mexico—in the past we have operated with only one special agent in New Mexico. When I was talking about the reassignment I was referring to the assignment to New Mexico of an additional agent from another area in the Bureau that does not have quite the same problems that we do down in New Mexico, so we will have doubled our forces, you might say, in this coming year to deal with law enforcement, which I know is still rather minor——

Senator Bingaman. These people will be in Santa Fe?

Mr. Luscher. They will be in Santa Fe. In addition to that, we are also putting on what we now are categorizing as law enforcement rangers. They have a little different assignment, working on the less serious violations. In fiscal year 1986, we will be putting two more rangers into the program to try to help out, and we are also looking at the possibility of expanding that further, depending on what our final funding situation is. We are cognizant of the problems in law enforcement and we are doing our best to try to respond to them. In addition, when we do have a major area like the Four Corners area that has some real vandalism and some pot hunting going on, we have the capability of pulling in agents from any of the other western States to assist in this program. There are 29 agents in total and we can marshal as many of those as we need.

Senator Bingaman. How do you find out about these? Would you just of lead me through how these things are called to your attention, if you have got a man or two men in Santa Fe who are supposed to solve this problem, I just have great difficulty seeing how they handle it.

Mr. Luscher. Normally, they are not the ones that initially discover that pot hunting or vandalism has taken place. That either comes from the general public—people who are out recreating on the lands, using them, will report that they know that there is some vandalism taking place—or our own employees who are in the field constantly and are also on the look-out for anything that seems unusual and they are sensitive to that fact and they report back. Once we get the report, then normally our area people will investigate that further and if it looks like vandalism is confirmed is serious, then we will bring our law enforcement people in to do the rest of the investigation and carry out the prosecution.

Senator Bingaman. Since ARPA has been in effect, how many successful prosecutions have you had here in New Mexico?

Mr. Luscher. We have had no prosecution in New Mexico under ARPA. Under the National Historic Preservation Act we had one prosecution of some digging in the Taos area, and there was a conviction on it. Bureau-wide, there have only been 22 cases processed under ARPA, of which 1 was dismissed, 11 were successfully prosecuted, and 10 are still pending.

Senator Bingaman. Let me just ask you, is it your perception that this low level of prosecution, almost nonexistent level reflects lack of activity that should be prosecuted, or do you generally agree with some of the earlier testimony that the problem has gotten much worse in the last 5 years since ARPA has been on the books, not in the cause and effect, but just that the organized looting of these sites has become a major, major problem. It strikes me that if that's so, then there should be some evidence of increased prosecution.

Mr. LUSCHER. In my own opinion, I do not think that we have the level of pot hunting and vandalism in New Mexico, that we may have in areas further north. I just do not think it may come to that point, but I do think it is there, yes. I tend more to agree with what Tom Merlan said this morning—that we are getting more damage to resources not from the organized pot hunting, but from other activities that are taking place in New Mexico that impact the land surface—the minerals, mining, oil and gas and all those. We are spending the bulk of our effort trying to make sure that those activities are not impacting the archeological resources.

Senator DOMENICI. Am I reading a significant disparity? Incidently, I tend to agree with your last statement, but am I seeing a disparity in prosecution between the Forest Service and BLM? I mean, the Forest Service is doing more and prosecuting more, or am I reading your numbers wrong? You told us that you had done a substantial number, 3,000 citations, 31 convictions under ARPA since its enactment. Eighteen convictions on those who dig and sell them. Why do you have that many and the others have few or none? Does anybody know? It's the same law, isn't it?

Mr. MUNIZ. Yes, it is. All I can do is relate to you what the efforts of the Forest Service have been. The 3,000 Senator, I'm trying to recall what the context of that was in my statement to you.

Senator DOMENICI. Three thousand citations for violations of cultural resource loss and regulations.

Mr. MUNIZ. Yes. Those were citations issued by either our special agents or our level four officers that we have throughout the region. That's a nationwide figure. Nationally, we had 65 prosecutions. So that's the scope.

Mr. LUSCHER. Senator, in my opinion, one of the reasons for the disparity might be that, again, Forest Service has worked for many years using rangers, I guess you call them level-four, law enforcement. The Bureau of Land Management is just getting into this in recent years, having people on the ground in every day situations who are able to issue citations. In fact, we here in New Mexico just received from the magistrate the ability to issue citations within the last 3 or 4 months. Until we had that, even if we had the people on board, we could not issue a citation on those minor offenses.

Senator BINGAMAN. Let me just ask for the same information of the Park Service. Maybe you gave it and I didn't get it. What is the record of prosecution, successful prosecution for the Park Service?

Dr. KEEL. Senator, I do not know the precise number. We have had several, and I would like to make this observation in regards to prosecution under ARPA. As I indicate in my testimony, there has been a reluctance in the 18 months or so for the law enforcement people, very often on the advice of the Justice Department, to move forward and try to prosecute these types of violators. And, I would also like to make this observation, that—under the Antiquities Act of 1906, which did include the ability—the authority was there to prosecute for violations of the 1906 act. As far as I know, there were only two cases that were tried under that act. One of those was dismissed. The second one resulted in a conviction, which was overturned by the Federal Court of Appeals.

Senator **Domenici**. That's why we did ARPA.

Dr. **Keel**. That is why ARPA came to be, and I certainly defer on the observations that Senator Domenici has made about the priority and the efforts that the executive department perhaps has provided in terms of implementing the requirements to ARPA. Nonetheless, I would point out that we have had a number of successful prosecutions and it is one of the things that I will be collecting this year—trying to find out precisely across the Government in all executive agencies, what is the prosecution record, as well as the number of incidents and citations, and so on. We will be presenting that information or as much of it as I can possibly collect in our annual report to the Congress. One other observation that I would like to make in terms of the National Park Service and its efforts and the way we go about enforcing the Act in terms of vandalism is that, again, our rangers, our interpreters, our people who are out in the national parks have been instructed—we have done some consciousness-raising across the Service in regard to keeping an eye out for the archeological resources.

The same has happened in other areas—other branches of the Interior—and as a gentleman from the Forest Service was talking about the kind of surveillance they had, the kind of monitoring they had, I will point out this, that it is one of the Department's efforts to make all of our people who are out on the public lands aware of this. I think a good example of that is last year the Fish and Wildlife Service had a successful prosecution that was brought about by a zoologist who was doing a muskrat inventory by helicopter, observed an unauthorized excavation going on, got on the radio, called, the law enforcement officers were notified and the perpetrators were apprehended as they came off the wildlife refuge.

I would also point out that—I may have already done it—last spring I met with all of the law enforcement chiefs from all of the regions within the National Park Service. We spent a half day talking about the way we could improve the enforcement of the acts. We will continue to follow that up.

Senator **Bingaman**. I gather you said Mr. Kerr is here. Can he respond to the question of the extent of the prosecution here in New Mexico?

Mr. **Kerr**. We have had no ARPA prosecution. We have had no cases reported to us in New Mexico inside National Park Service areas. We have had a number of incidents we call misdemeanor incidents—picking up arrowheads, picking up pot shards. I think in New Mexico it is 167—196 regionwide, but no ARPA cases.

Senator **Bingaman**. Is it your thought that the reason you have had no cases and none of it's reported to you is that the activity is not occurring, or that you just don't have any ability to monitor?

Mr. **Kerr**. I think if the activity were occurring inside the national parks it would be reported to us or found by our personnel. We have commissioned law enforcement officers in each section of the parks in New Mexico. It numbers from 2 in El Morro, to an increased number in Chaco, to 15 or 20 in an area like Big Bend. These people go through the national law enforcement academy in

Georgia. They are trained for law enforcement. If they came across it or it was reported to them it would be investigated and prosecuted.

Senator **Bingaman**. Let me ask Mr. Allan, if I could, your comment about the BIA's role in this. Again, I guess there have been no prosecutions under ARPA, is that correct?

Mr. **Allan**. That is correct, Senator. We have had a number of investigations. We have not had any that have resulted in prosecution.

Senator **Bingaman**. It's your thought that that's because there's not—no activity to prosecute?

Mr. **Allan**. No, sir, I would not say that there was no activity. We do have field incident reports where we discover incidents of archeological vandalism. The usual case is that that vandalism is not detected until the perpetrators have long left the scene, sometimes by a matter of months. It is very difficult to make a prosecution under those kinds of circumstances. Generally, however, for most lands under our jurisdiction, the access is much more limited than it is, for example, the Bureau of Land Management lands or Forest Service lands, and generally, as a result, I do think the level of the problem is much less. As a result, we have oriented most of our efforts to trying to protect the archeological sites from our own activities—those things we fund, license and approve. The majority of our program has been oriented towards the National Historic Preservation Act as opposed to the Archeological Resources Protection Act.

Senator **Bingaman**. Let me just sort of summarize now. I guess everybody that's on this panel, all of the Federal agencies represented are generally of the view that the looting and vandalism problem on federal land is not, at least here in the Southwest, is not a major problem as far as your inability to deal with them. Is that what I am hearing, that the bigger problem is the damage to the archeological sites from activities that are licensed and that are going forward instead of the illegal activity on the lands? Am I misstating the message that I am hearing from everybody?

Mr. **Allan**. Senator, I think you have given us the tools to work with under the Archeological Resources Protection Act, in terms of the vandalism. I think our orientation has been, again, trying to constrain our own activities.

Senator **Bingaman**. So you disagree with the suggestion of an earlier witness that the problem has gotten significantly worse in recent years?

Mr. **Allan**. I think we have seen a diminishment of the problem on lands under our jurisdiction.

Senator **Bingaman**. Is that the consensus among all the other panelists?

Mr. **Muniz**. Speaking for the Forest Service, I can't say that the problem of looting and theft is fading. I think that problem is still out there. I think the actions that were taken by the Forest Service in conjunction with the sister agencies have blunted the edge some. Folks know that there have been convictions. We do have surveillance, we do have people that are trained. We have geared up our level-two and level-four enforcement officers. Our capability has been strengthened in response to ARPA. In addition to that, there is some sensitive illegal addition going on so we did use informants. So we used that aspect of the law enforcement technique, if you will, to solidify the case that we wanted to make per ARPA. So I think that problem is still there. It's still very real. It will continue to get the kind of priority we think this merits, given the capabilities it's established.

But at the same time, I think the opportunity for us to solve some real significant problems over on the protection side, those represented, I think, some significant opportunities for us and that's what we intend to pursue.

Senator Bingaman. Bill, I guess you had stated your position earlier, but go ahead if you like.

Mr. Luscher. I tend to agree with the Forest Service. We recognize the vast acreages of lands that we have out here. As volatile as it is, there are undoubtedly going to be some cases of pot hunting that are taking place. I again think that our focus right now, with the limited personnel resources we have, should be more on the protection of areas rather than marshalling all of our forces to go out and start a heavy surveillance effort to stop pot hunting. I think when we get reports of vandalism or pot hunting, we will follow up expeditiously and see that they cease.

Senator Bingaman. I gather the Park Service has already spoken.

Mr. Kerr. I think one of the reasons we have not had any reported ARPA incidents since I have been in the region is we have smaller areas, more adequate staff of law enforcement people inside each national park area. It is easier to control that kind of thing. That means that picking up arrowheads and shards does not go on and we deal with that.

Senator Bingaman. Dr. Stanford, do you have any point of view on this issue?

Dr. Stanford. I think that what I have heard here I don't quite agree with. I think that there is a whole lot more vandalism that goes on. Now, perhaps, in terms of the way it's been phrased here, the responses have been correct, but I think that there really is a whole lot more than they know about because you can't go out to a single ruin that hasn't been vandalized, and in my opinion, the law enforcement capabilities of this organization should be increased, and additional funding put into that, into the management of the cultural resources. The other problem, I think, that hasn't been touched on here, maybe it has elsewhere since we were not directly involved with these particular matters, but in cases I have heard of, it seems to me that we find that the judges are hesitant to prosecute and when they do, I believe that the fines or penalties are not near stiff enough. They should be increased.

Senator Bingaman. Thank you, Doctor.

Senator Domenici. Doctor, before I move to another witness, just so I understand, you are saying you can't go out to any significant site without finding evidence of vandalism. Are you referring now to sites within the State of New Mexico that these particular people have referred to in answering Senator Bingaman, when they were speaking about New Mexico?

Dr. Stanford. Well, precisely. That the Park Service manages, and they're relatively free because of the enforcement capability, the staff and the small size they are dealing with.

Senator Domenici. I just want to know if you know that significant sites in New Mexico are the subject of vandalism or you are merely reporting that it's generally understood that there's vandalism at significant sites. I don't know which one you are saying.

Dr. Stanford. Both.

Senator Domenici. So you know about that in the State?

Dr. Stanford. Yes.

Senator Domenici. How do you find that out?

Dr. Stanford. In the process of going around and looking at archeological sites here in New Mexico.

Senator Domenici. I didn't understand that when you testified because you said you had very little activity here.

Dr. Stanford. Our own personal research but we are in the area and look at sites.

Senator Domenici. Can I ask now, the federal agencies that are here, number one, do you have any suggestions with reference to amending ARPA so as to make it more effective? I am not now asking with reference to resources, but with reference to definitions, penalties, any of the content of it that you might think ought to be strengthened to make your job more achieveable? Do you have any concerns, or is it all right as it is in that regard?

Dr. Keel. Senator, from my perspective, I think that ARPA is a very excellent tool. I think we have the tools to work with it in the areas of protection as well as the area of curation. I think you will be seeing more action in this area shortly from the Secretary of the Interior.

Senator Domenici. How about the field people now? Do you have any specific suggestions?

Mr. Kerr. No.

Mr. Allan. No.

Senator Domenici. Sotero, did you have any specific recommendations for amending ARPA that would make the enforcement more successful?

Mr. Muniz. I didn't have, but the law enforcement director advises me that I should have. Let me read those into the record. Under section 6 of ARPA, paragraph D, where it says any person who knowingly violates or takes, procures or solicits. The word knowingly is becoming a barrier to us as we seek prosecution of that action. Further, under section 6(D), the last sentence, there's a reference to the cost of restoration repair of such resources exceeds a sum of $5,000 shall be fined not more than that and that limit of $5,000 is also an impediment in terms of successful prosecuting actions.

Senator Domenici. When we passed the law, we had a major debate on the word knowingly. It's still with us. We have constitutional arguments that you can't prosecute people for criminal behavior if they don't know they are doing it. I think the record will reflect that our intent was to use the broadest legal definition and it still may be causing trouble, but I appreciate that.

Dr. Keel. Senator, one thing did occur to me and it is not so much in terms of the changes modifying the law in terms of enforcement, but there should be consideration in terms of the civil and criminal penalties as to what happens to the money that may be collected under those as fines, and those funds going back in the general treasury. You have the damage done to the archeological site. I think the Congress, perhaps, might consider modifying the act to ensure that any money that is collected goes back to the agency when the purpose for that money is to correct the damage that the violator has caused. I think that would help a lot in the future protection of the public properties.

Senator **Domenici**. Could we talk a little bit now about paleontology and the paleontologists? As suggested by the good doctor, we haven't spent any time talking about them at this point. You heard testimony with reference to this, could you discuss the kind of problems that you are having and address the issue that was raised for this subcommittee in terms of regulations that you were prescribing, where you get the authority and what you intend to do about the contentions of the palentologists that they just don't work? Who wants to talk about that? BLM is part of it.

Mr. **Luscher**. I will start out, Senator. In referring to the issue on authority, I think it is very clear that we do have authority to be able to control those uses on Federal property. This comes not only from the Federal Land Policy and Management Act, which I think gives us that authority, but I think for many years we have also used the authority that comes under the Historic Preservation Act. Years ago they were gathered and we kind of follow that through in the years as far as a permitting process is concerned. I think it has only been in recent years, here in New Mexico at least, that we really became aware of some of the paleontological resources that are out here. That was stimulated by the fact that we anticipate some major mineral development in the San Juan Basin. We really started to bring this to the forefront. I think there have been a lot of people in the paleontological community that have been working in that area for many years, but I think as far as the agency, we had not probably paid that much attention to the program up there, to be really frank about it, until development possibilities started happening.

We spend a lot of time and energy now in looking at those. I think it was the landmark San Juan Wilderness legislation that stimulated great interest. The identification of the Fossil Forest as an area having some very significant resources is causing us to follow through on that early commitment and we are going to have the studies and the evaluations made out there on that resource.

Senator **Domenici**. Let me just ask. In the testimony that's already been given to the committee, this statement was made. On the other hand, BLM is incapable of preventing the amateur collector, amateur paleontologists, the vandal or other member of the general public whose activities more often than not destroy valuable scientific information from collecting fossils. Is it true that the way ARPA is written, you cannot prosecute someone for what is commonly known as paleontological activity?

Mr. **Luscher**. I believe that is correct but I am not positive of that.

Senator **Domenici**. I think that's the one point that is being made. Subsequently, you cannot prosecute them for driving a truck across the sagebrush, find one of these sites. But they contend that the big delays are caused by silly rules and procedures and they use an example, such as assessing the environmental impacts of driving a jeep on a dirt road in an area devoid for miles of essentially all vegetation. What about that contention? Could that possibly be true and if it is, what is the basis for that kind of restriction?

Mr. Luscher. I will respond to that in two ways. One is that we are required under NEPA to do an environmental assessment when we have applications for paleontologic projects. I understand the case being referred to is within a wilderness area, and yes, even though there is a dirt road within a wilderness area, we are going to assess the impacts of using that road on the wilderness characteristics of the area.

Senator Domenici. In fact, the one alluded to here was within a wilderness area?

Mr. Luscher. That is my understanding.

Dr. Lucas. That's incorrect. My statement there was not intended to refer to wilderness areas. It's a general BLM procedure to require an environmental assessment of any impacts on an area that's going to be entered for paleontological excavation instead of a wilderness study area or any BLM lands according to permits that have been issued to me. So my reference there is a general one that refers to all BLM lands, and I would recommend Mr. Luscher, that all permits issued by the BLM have that stipulation attached to them, that before you are going to carry out any excavation of any sort, you have to get some sort of clearance, which will and has in the past, not in wilderness areas, included clearing a Jeep to drive on a dirt road in an area of no vegetation.

Senator Domenici. That is correct?

Mr. Luscher. We do require environmental assessments on all of our activities. As far as a specific Jeep road, I cannot respond to that. I am just not aware of it.

Senator Domenici. So do I understand directly that it is your interpretation that for any paleontological permit, at least an environmental assessment must be made? Is that correct?

Mr. Luscher. That is correct.

Senator Domenici. Are you arguing that that is too unreasonable? You heard the question.

Dr. Lucas. I have no objection to some environmental assessment being made. I think it's a matter of the difference between the letter of the law and spirit. Clearly an already existing dirt road in an area with no vegetation, one which has been driven over many times by a four-wheel drive vehicle, it's unclear to me what environmental impact driving a vehicle over that has. It seems to me we are seeing the BLM wasting Federal money, time and particularly the time of paleontologists in carrying out assessments in an unreasonable fashion.

Mr. Luscher. I do have my area manager here from Farmington who so far has conducted the bulk of our paleontological work in the State, and he may be able to give some further enlightenment on this subject.

Senator Domenici. Frankly, I don't care for myself to go into that much detail, but I do think that a good point is being made that paleontological research did not receive the kind of position in this whole set of activities or in ARPA in terms of violations that it probably deserves today, and I would just like to try to be part of working out some of the difficulties. If we need some law changes, fine, but it does seem to me that we have got one group of scientists that are totally loggerheads and the other saying that things are going pretty well, and I don't know why we can't work that out. Do you think we need anything further or we can just go through the record as we develop it?

Senator BINGAMAN. I think it would be good to perhaps get the various officials here to supplement the record on what they actually see as their present authority with regard to—not only their authority, but perhaps the level of their activity with regard to trying to regulate people involved in paleontological research.

Senator DOMENICI. Do you have your fieldman here, Mr. Luscher, so that we could ask questions of him in this regard?

Mr. LUSCHER. Yes, we do. Mr. Matt Millenbach.

Senator DOMENICI. Can we do that in just a moment? Will you be available and we will try that. Let me move for a moment, then, to Bob Kerr and Chaco Canyon. If we haven't, we will hear testimony about the legislation that was passed that created the outliers and various things of management as we attempted to locate and preserve those certain outliers. I was part of that. Obviously that's in New Mexico and it was called to our attention and we put together this very, very fragile combination of the Navajo Nation, BLM, BIA, National Park Service in terms of various management and preservation schemes. We heard testimony already about the activities in terms of the BLM and the outliers.

I would just like to ask you as one of the major participants, is this joint management operation working considering the complexities of the area? I think there will be some testimony suggesting that we ought to change it drastically or dramatically and put the National Park Service basically into management of the outliers? We put a lot of work in the legislation because there's many interests. Could you give us your assessment of where it is at this point and any recommendations you have with reference to it?

Mr. KERR. I would be happy to, sir. I became involved with the legislation on the Chaco Archeological Protection Site in January or February 1981, right after it was passed. And as the law was written, the National Park Service was responsible for the preparation of a joint management plan and consultation and concurrence of the other agencies, as well as a general management plan for Chaco Park itself. And I think from my perspective over the last four years, it has been a very, very successful approach to the problems of the archeological protection sites, as well as the park in San Juan Basic area, that probably has one of the most complex land ownership patterns that I have ever been associated with. At least, I was going to say, probably in the United States and I will defy anybody to show me where it is more complex.

I think the cooperation that has developed between the Navajo Nation, the Federal agencies and the State of New Mexico can probably be used as a textbook example of what can be done when people sit down with good intentions in mind to develop something that will work.

We have proceeded through the process and have submitted to the Congress a joint management plan that provides for the protection of the archeological protection sites by the agency generally that has land management responsibilities in the surrounding area. As you remember, the law itself or the committee report at least said that the sites were not to be part of the National Park System. I think that was an inappropriate method to protect those sites. Quite frankly, if the National Park Service were to be told in subsequent legislation that we now are responsible for protection and management and interpretation of those sites it could not be done without a tremendous infusion of manpower and money. We just do not have the capability of going outside the park service areas that we administer today and taking on those sites that are scattered from north of Farmington, Window Rock and Colorado clear south of Grants. I think it is more appropriately addressed by the BIA, by the Navajo Tribe.

Senator **Domenici**. All pursuant to the joint management plan that you are in charge of producing with their cooperation?

Mr. **Kerr**. Correct. I think the critical issue right now, and it is one that is in the mill back in Washington in the Interior Department, as I understand, it may have gone over to OMB. One of the problems that we have—all of us, me in particular being kind of the chairman of the group—has been the development of a budget proposal that would provide additional funding, not necessarily additional people, but additional funding at least to protect, manage, and interpret those archeological sites. The Bureau of Indian Affairs—I think rightfully so—has indicated that they have probably no legal authority to spend the money that they receive from the Congress for social activities on those land protection interpretive programs that deal with the archeological sites, and two-thirds of those sites are on BIA or Navajo trust properties. The BLM has mentioned 11 of those. I think it is critical to the successful program that some funding be provided to assist the BIA, particularly until the BLM regulations are behind it, in terms of management and protection of those sites. Without it, I think the entire process that we have gone through the last 4 years could fall by the wayside.

Senator **Domenici**. We have the reports from the joint group.

Mr. **Kerr**. Even though the Congress does not have that yet, it has been submitted. That's the reason it gets kind of—to where it is. I submitted it to the Director of the National Park Service, to the Assistant Secretary for Fish and Wildlife and Parks, and it has gone to the Assistant Secretary for public lands. I cannot track whether it has gotten over to the BIA in Washington yet or not. I was told by one of the BLM fellows this morning that they thought it had gone to OMB, but it is in the bureaucracy at least.

Senator **Domenici**. Without being specific, can you give us a ballpark number?

Senator **Bingaman**. This is pre-OMB or after OMB?

Mr. **Kerr**. What I will submit for the record is what we collectively thought was needed to manage the sites. Did I answer your question?

Senator **Domenici**. Sure.

[The information follows:]

D18(SWR-PP) OCT 21 1985

Honorable Pete V. Domenici
United States Senate
Washington, D.C. 20510

Dear Senator Domenici:

Pursuant to your request for additional information regarding funding for the implementation of the Chaco Culture Archeological Protection Site System Joint Management Plan, enclosed is a copy of a budget package transmitted by the Director of the National Park Service to the Department of Interior. This package was sent by the National Park Service to the appropriate Department of the Interior offices because the National Park Service took the lead in the formulation of the joint management plan and because I have been serving as Chairman of the Interagency Management Group for the past 2 years.

The budget package was developed by a Subcommittee of the Interagency Management Group and involved the National Park Service, the Bureau of Indian Affairs, and the Bureau of Land Management. The package includes a 5-year budget program of items that would be required to implement the joint management plan. Funding for plan implementation for Navajo sites would be requested by the Bureau of Indian Affairs. This budget package does not include a specific request for the National Park Service because our role will be limited to consultation and technical assistance.

I have been very pleased with the cooperative efforts of all involved in this important management process for the protection of the archeological sites. The planning phase progressed very rapidly. We are now preparing to implement the plan. However, successful implementation of the plan can only become a reality through the availability of funding for the items listed in this budget package. If funds are not forthcoming, this exciting new interagency management model has no prospects for success.

I enjoyed visiting with you during the Albuquerque meeting and extend our appreciation for your interest and support of cultural resources preservation.

Sincerely,

/s/ Robert I. Kerr

Regional Director,
Southwest Region

Enclosure

CHACO CULTURE ARCHEOLOGICAL PROTECTION SITE SYSTEM

BUDGET SUMMARY
for
IMPLEMENTATION OF THE JOINT MANAGEMENT PLAN
(5 year program)*

Agency	Total
Bureau of Indian Affairs - Navajo Tribe	
.administration and management	$2,717.060
.authorizations for land protection and interpretation	$1,624,760
Bureau of Land Management	
.administration and management	$418,150
.authorization for land protection and interpretation	$902,400

*The enclosed data includes a yearly itemization by agency of items required to implement the approved joint management plan.

Background

Congress passed Title V of PL 96-550 in 1980 to provide for preservation, protection, research, and interpretation of the Chacoan system. Thirty-three sites located outside of Chaco Canyon were authorized as Chaco Cultural Archaeological Protection Sites. The sites are located throughout the San Juan Basin on public, state, Indian and private lands. The legislation authorizes the Secretary of the Interior to acquire lands, waters, and interests within the protection sites (Section 503); enter into cooperative agreements with surface and other interest owners (Section 504); and to manage the sites to protect and preserve the Chacoan culture resources and to provide for its interpretation and research. Funds were authorized to implement provisions of the title.

An Interagency Management Group (IMG) consisting of representatives from the National Park Service, Bureau of Land Management, Bureau of Indian Affairs, State of New Mexico, and Navajo Tribe was established by Section 506(3) of PL 96-550 to advise the Secretary in matters relating to the management of the protection sites. The IMG has prepared a joint management plan which provides guidance for the management of the 33 sites. The IMG has also outlined who the leading planning/management entity will be for each site. The Bureau of Land Management will manage all sites on public and state lands, and those on non-Indian private land. The Bureau of Indian Affairs and Navajo Tribe will manage sites on Navajo Indian allotted lands and Navajo Tribal trust lands. The Navajo Tribe will manage sites on tribal fee lands.

All funds being requested for the implementation of Title V of PL 96-550 are new and will be added to existing funds for reasons as follows. Funds for BIA/Navajo Tribe sites will be administered through the BIA. The Navajo Tribe may directly administer the PL 96-550 activities funded through the BIA. The Navajo Tribe and the BIA are adamantly opposed to taking funds from existing programs such as those for education, health, and social services in order to implement PL 96-550. Neither the BIA/Navajo Tribe has an ongoing program for archaeological site protection, interpretation, and/or enhancement. Currently archaeological and historic projects are only undertaken as required to support programs such as economic development and social services.

Introduction

Public Law 96-550 authorizes up to $11,000,000 for acquisition and $500,000 for development of lands and resources within the archaeological protection sites and the expanded boundaries of Chaco Culture National Historic Park. The PL 96-550 acquisition funds are to be used to acquire lands or interests within the protection sites, land surveys, gaining easement to the sites, and for entering into cooperative agreements. PL 96-550 development funds are to be used for the establishment of permanent facilities utilized for interpretation of the sites and the Chacoan system.

Other management activities not funded by PL 96-550 will be funded through individual agency authorizations coordinated by the IMG. Activities funded through agency authorization would include the preparation of site management plans, site protection measures, data base needs, stabilization, signing, and support for interpretation.

The budget request for the 9 sites managed by the BLM and the 23 sites managed by the BIA/Navajo Tribe is attached. The remaining site included in the legislation is Squaw Springs which has been proposed to be dropped from the legislation and therefore no funds are requested for its management. The budget request has been divided into four parts:

1. Activities proposed by the BLM to be funded through PL 96-550.
2. Activities proposed by the BLM to be funded through the Department of Interior (agency authorized activities).
3. Activities proposed by the BIA and Navajo Tribe to be funded through PL 96-550.
4. Activities proposed by the BIA and Navajo Tribe to be funded through the Department of Interior (agency authorized activities).

PL 96-550 Funds Activities

Land Survey. Land surveys to identify the boundaries of the protection sites are necessary for legal management and cooperative agreement purposes. The BLM managed sites will be surveyed by the cadastral survey crew from the BLM New Mexico State Office. The BIA/Navajo Tribe managed sites will be surveyed by a crew hired for this activity.

Easements. Currently the BLM does not have legal access to all of the protection sites on public lands. Funding for easement acquisition is scheduled for Kin Nizhoni, Pierre's Site, and Halfway House during years 2 and 3.

Cooperative Agreements. PL 96-550 has directed the Secretary of the Interior to enter into cooperative agreements with the owners of private properties or interests in the protection sites. The BLM will attempt to enter into cooperative agreements with the owners of Andrews, San Mateo, Morris 41, and Jacques sites and the owners of portions of Kin Nizhoni and Las Ventanas. The BLM will also negotiate cooperative agreements with the owners of mineral leases or other rights within the protection sites. The BIA/Navajo Tribe will negotiate cooperative agreements with the owners of Indian allotted lands.

Exchanges and Fee Purchases. Three sites have been identified by the BLM at this time for acquisition. However, Section 504 of the Act requires that land exchanges be given first consideration before attempting fee purchase. Section 504 of the Act also restricts acquisition of State land through exchanges only, so no sales figures are given for the State tracts. If an exchange cannot be negotiated, then fee purchase will be considered. All exchange and sale figures include the mineral estate except for Morris 41 where the oil and gas potential has more than nominal value. Nontrust land currently owned by the Navajo Tribe may be converted to Tribal Trust status as a protective measure.

Visitor Facilities. The BIA/Navajo Tribe have proposed an interpretation facility/administration center at the Newcomb site to provide for the preservation and interpretation activities of the BIA/Navajo Tribe. The management plan and a feasibility study for the Newcomb facility will be completed during years 2 and 3. The Joint Management Plan did not identify the Newcomb site or any BIA/Navajo Tribe site for visitor use; however, the IMG agreed that the management plan and feasibility study should be prepared during years 2 and 3. At the end of year 3 a decision will be made by the IMG on scheduling the facility construction at the Newcomb site.

Agency Funded Activities

Management Plans. Cultural resources management plans will be prepared for each protection site. The plans will summarize the major decisions, goals, priorities, and implementation procedures necessary to manage the protection sites. The BLM will have completed the management plans for Kin Nizhoni and Twin Angels during FY 85. Management plans for the remaining three sites will follow. Plans for non-Indian privately owned sites will be prepared after a cooperative agreement for the management of the sites is entered into with the owner.

The BIA/Navajo Tribe have proposed to hire two individuals to prepare five to six management plans each year during years 2 through 5. Three thousand dollars have been budgeted for each site during year 1 to cover costs incurred to start the planning process. The plans would be prepared after the cultural inventory is completed and prior to stabilization activities.

Feasibility studies will be prepared for Pierre's Site, Las Ventanas, and Newcomb. The studies will detail the feasibility of public interpretation at these sites.

Site Protection. Site protection activities include the monitoring programs and the patrol and surveillance program. Fencing is also a site protection activity. The BLM has scheduled approximately six weeks yearly to be spent at each site to complete the photographic documentation, erosion-monitoring, cattle-monitoring, and conducting the patrol and surveillance program. Fencing of the remaining two sides of Pierre's Site will be done in year 4.

The BIA/Navajo Tribe have proposed protecting the sites through contracting with local residents to provide daily surveillance of the sites in addition to hiring four full-time Tribal Rangers to patrol the sites and enforce applicable laws. Protective fencing will be undertaken at the Lake Valley, Newcomb, and the Skunk Springs sites during year 1.

Data Base Needs. Data base needs include the consolidation of all available literature on the protection site, preparation and submission of the National Register of Historic Places nominations, preparation of the Historic Structures Stabilization Reports, and an archaeological inventory. The BLM has scheduled the completion of the Historic Structure/Stabilization Report prior to initiation of the stabilization activities. The archaeological inventories will be undertaken after the completion of the management plans. The BIA/Navajo Tribe have scheduled the archaeological inventories to be conducted prior to the preparation of the management plan for each site. The five or six site surveys per year will be conducted by qualified staff hired for this purpose.

Visitor Use. Visitor use funds are requested for the Pierre's Site and the Newcomb site. Funds for the Pierre's Site will be used to develop a visitor brochure. The BIA/Navajo Tribe will be used to maintain and manage the Newcomb site. Two employees will be hired during years 4 and 5 for this purpose.

Summary

Public Law 96-550 was passed to provide for the preservation and protection of Chacoan resources. The funding needs outlined in this request would ensure an active management program at each of the 32 sites. Management costs of the sites during years 1 through 5 would be:

	Year	PL 96-550 Funded	Agency Funded
BLM	1	71,400	69,500
	2	221,200	83,750
	3	97,200	106,300
	4	501,400	102,000
	5	12,000	56,500
BIA/ Navajo Tribe	1	155,300	569,300
	2	116,100	477,560
	3	-0-	571,500
	4	225,560	529,100
	5	1,127,800	569,600

Activities such as land surveys, fencing, and construction of an interpretative facility would be accomplished during the first five years and would only have to be budgeted for once. In the future, management plans will need to be updated and site stabilization maintained. Monitoring and patrol/surveillance will continue indefinitely at established site protection levels. Additional funding after year 5 will be necessary to fund other management activities at all sites and activities at new sites included in the Chaco Archaeological Protection Site System.

Stabilization. Emergency stabilization to protect the sites from further deterioration was called for in the Joint Management Plan. Most of the 32 sites under this funding request are in need of stabilization and/or backfilling. Currently the BLM is requesting funds only for sites on public lands. The BIA/Navajo Tribe will hire qualified staff and purchase the equipment necessary to stabilize sites on Indian lands.

Signs. Signs will be purchased or made to place at the protection sites to advise the public of the laws protecting the sites. The BLM has already placed signs at each of the sites on public lands, but will place additional signs at Twin Angels and Pierre's Site.

AGENCY AUTHORIZATION-BIA/NAVAJO TRIBE
ADMINISTRATION-MANAGEMENT

OUTLIER	YEAR	MGT PLANS	SITE PROTECTION	DATA BASE NEEDS	VISITOR USE	STABILIZATION	SIGNS	TOTAL
ALLENTOWN	1	3.000	10.300	2.000		3.600	600	19.500
	2		9.300	2.200		1.500		13.000
	3		9.700	2.400				12.100
	4		10.150	21.700				31.850
	5	12.000	10.550	2.800				25.350
SUBTOTAL		15.000	50.000	31.100	0	5.100	600	101.800
								0
BEE BURROW	1	3.000	10.300	2.000		3.600	600	19.500
	2		9.300	2.200		1.500		13.000
	3		9.700	21.500				31.200
	4	11.500	10.150	2.600				24.250
	5		10.550	2.800		35.500		48.850
SUBTOTAL		14.500	50.000	31.100	0	40.600	600	136.800
								0
BISA'ANI	1	3.000	10.300	2.000		3.600	500	19.400
	2		9.300	2.200		1.500		13.000
	3		9.700	21.500				31.200
	4	11.500	10.150	2.600				24.250
	5		10.550	2.800		96.900		110.250
SUBTOTAL		14.500	50.000	31.100	0	102.000	500	198.100
								0
CASA DEL RIO	1	3.000	10.300	21.100		3.600	500	38.500
	2	10.400	9.300	2.200		1.500		23.400
	3		9.700	2.400				12.100
	4		10.150	2.600				12.750
	5		10.550	2.800				13.350
SUBTOTAL		13.400	50.000	31.100	0	5.100	500	100.100
								0
COOLIDGE	1	3.000	10.300	2.000		3.600	600	19.500
	2		9.300	2.200		1.500		13.000
	3		9.700	21.500				31.200
	4	11.500	10.150	2.600				24.250
	5		10.550	2.800				13.350
SUBTOTAL		14.500	50.000	31.100	0	5.100	600	101.300
								0
DALTON PASS	1	3.000	10.300	2.000		3.600	500	19.400
	2		9.300	21.300		1.500		32.100
	3	11.000	9.700	2.400				23.100
	4		10.150	2.600				12.750
	5		10.550	2.800				13.350
SUBTOTAL		14.000	50.000	31.100	0	5.100	500	100.700
								0
GREAT BEND	1	3.000	10.300	21.100		3.600	500	38.500
	2	10.400	9.300	2.200		1.500		23.400
	3		9.700	2.400				12.100
	4		10.150	2.600				12.750
	5		10.550	2.800				13.350
SUBTOTAL		13.400	50.000	31.100	0	5.100	500	100.100
								0
GREENLEE RUIN	1	3.000	10.300	2.000		3.600	500	19.400
	2		9.300	2.200		1.500		13.000
	3		9.700	21.500				31.200
	4	11.500	10.150	2.600				24.250
	5		10.550	2.800		29.400		42.750
SUBTOTAL		14.500	50.000	31.100	0	34.500	500	130.600
								0
GREY HILL SPRING	1	3.000	10.300	21.100		3.600	500	38.500
	2	10.400	9.300	2.200		1.500		23.400

	3		9.700	2.400			29.400		41.500
	4		10.150	2.600					12.750
	5		10.550	2.800					13.350
SUBTOTAL		13.400	50.000	31.100		0	34.500	900	129.500
									0
HAYSTACK	1	3.000	10.300	2.000			3.600	600	19.500
	2		9.300	2.200			1.500		13.000
	3		9.700	21.500					31.200
	4	11.500	10.150	2.600					24.250
	5		10.550	2.800					13.350
SUBTOTAL		14.500	50.000	31.100		0	5.100	600	101.300
									0
HOGBACK	1	3.000	10.300	21.100			3.600	600	38.600
	2	10.400	9.300	2.200			1.500		23.400
	3		9.700	2.400					12.100
	4		10.150	2.600					12.750
	5		10.550	2.800					13.350
SUBTOTAL		13.400	50.000	31.100		0	5.100	600	100.200
									0
INDIAN CREEK	1	3.000	10.300	21.100			3.600	900	38.900
	2	10.400	9.300	2.200			1.500		23.400
	3		9.700	2.400			68.200		80.300
	4		10.150	2.600					12.750
	5		10.550	2.800					13.350
SUBTOTAL		13.400	50.000	31.100		0	73.300	900	168.700
									0
LAKE VALLEY	1	3.000	12.800	2.000			3.600	900	21.900
	2		9.300	2.200			2.100		13.600
	3		9.700	2.400					12.100
	4		10.150	21.700					31.850
	5	12.000	10.550	2.800					25.350
SUBTOTAL		15.000	52.500	31.100		0	5.700	900	104.800
									0
MUDDY WATER	1	3.000	10.300	2.000			3.600	600	19.500
	2		9.300	21.300			1.500		32.100
	3	11.000	9.700	2.400					23.100
	4		10.150	2.600					12.750
	5		10.550	2.800					13.350
SUBTOTAL		14.000	50.000	31.100		0	5.100	600	100.800
									0
NEWCOMB	1	3.000	12.800	21.100			3.600	900	41.400
	2	10.400	9.300	2.200			1.500		23.400
	3	15.000	9.700	2.400					27.100
	4		10.150	2.600	35.900				48.650
	5		10.550	2.800	35.500				48.850
SUBTOTAL		28.400	52.500	31.100	71.400		5.100	900	189.400
									0
PEACH SPRINGS	1	3.000	10.300	2.000			3.600	600	19.500
	2		9.300	21.300			1.500		32.100
	3	11.000	9.700	2.400					23.100
	4		10.150	2.600			750		13.500
	5		10.550	2.800					13.350
SUBTOTAL		14.000	50.000	31.100		0	5.850	600	101.550
									0
RATON WELL	1	3.000	10.300	2.000			3.600	900	19.800
	2		9.300	2.200			1.500		13.000
	3		9.700	21.500					31.200
	4	11.300	10.150	2.600					24.050
	5		10.550	2.800			5.700		19.050
SUBTOTAL		14.300	50.000	31.100		0	10.800	900	107.100
									0
SANOSTEE	1	3.000	10.300	2.000			3.600	600	19.500
	2		9.300	2.200			1.500		13.000

	3		9.700	2.400				12.100
	4		10.150	21.700				31.850
	5	12.000	10.550	2.800				25.350
SUBTOTAL		15.000	50.000	31.100	0	5.100	600	101.800
SECTION 8	1	3.000	10.300	2.000		3.600	500	19.400
	2		9.300	21.300		1.500		32.100
	3	11.000	9.700	2.400				23.100
	4		10.150	2.600		17.600		30.350
	5		10.550	2.800				13.350
SUBTOTAL		14.000	50.000	31.100	0	22.700	500	118.300
SKUNK SPRINGS CRUMBLED HOUSE	1	3.000	12.800	2.000		3.600	600	22.000
	2		9.300	2.200		2.460		13.960
	3		9.700	2.400				12.100
	4		10.150	21.700				31.850
	5	12.000	10.550	2.800				25.350
SUBTOTAL		15.000	52.500	31.100	0	6.060	600	105.260
STANDING ROCK	1	3.000	10.300	2.000		3.600	600	19.500
	2		9.300	21.300		1.500		32.100
	3	11.000	9.700	2.400				23.100
	4		10.150	2.600				12.750
	5		10.550	2.800				13.350
SUBTOTAL		14.000	50.000	31.100	0	5.100	600	100.800
TOH-LA-KAI	1	3.000	10.300	2.000		3.600	500	19.400
	2		9.300	2.200		1.500		13.000
	3		9.700	2.400				12.100
	4		10.150	21.700				31.850
	5	12.000	10.550	2.800				25.350
SUBTOTAL		15.000	50.000	31.100	0	5.100	500	101.700
UPPER KIN KLIZHIN	1	3.000	10.300	2.000		3.600	500	19.400
	2		9.300	21.300		1.500		32.100
	3	11.000	9.700	2.400				23.100
	4		10.150	2.600		17.500		30.250
	5		10.550	2.800				13.350
SUBTOTAL		14.000	50.000	31.100	0	22.600	500	118.200
TOTAL		341.400	1.157.050	715.300	71.000	419.810	12.500	2.717.060
AGENCY FUNDED								
TOTAL-YEAR 1		569.200						
TOTAL-YEAR 2		477.860						
TOTAL-YEAR 3		571.500						
TOTAL-YEAR 4		529.100						
TOTAL-YEAR 5		569.600						
		2.717.060						

AREA YEAR PL 96-550 AUTHORIZATIONS-BIA/NAVAJO TRIBE

AREA	YEAR	LAND SURVEY	EASEMENTS	COOPERATIVE AGREEMENTS	EXCHANGES	FEE PURCHASES	VISITOR FACILITIES	TOTAL
ALLENTOWN	1							0
	2	7.000						7.000
	3							0
	4							0
	5							0
SUBTOTAL		7.000	0	0	0	0	0	7.000
BEE BURROW	1							0
	2	7.000						7.000
	3							0
	4							0
	5							0
SUBTOTAL		7.000	0	0	0	0	0	7.000
BISA ANI	1							0
	2	7.000			2.500			10.300
	3							0
	4							0
	5							0
SUBTOTAL		7.000	0	0	2.500	0	0	10.300
CASA DEL RIO	1			5.000				5.000
	2	7.000						7.000
	3							0
	4							0
	5							0
SUBTOTAL		7.000	0	5.000	0	0	0	12.000
COOLIDGE	1							0
	2	7.000		5.000				12.000
	3							0
	4							0
	5							0
SUBTOTAL		7.000	0	5.000	0	0	0	12.000
DALTON PASS	1	12.300						12.300
	2							0
	3							0
	4							0
	5							0
SUBTOTAL		12.300	0	0	0	0	0	12.300
GREAT BEND	1	12.300						12.300
	2							0
	3							0
	4							0
	5							0
SUBTOTAL		12.300	0	0	0	0	0	12.300
GREENLEE RUIN	1							0
	2	7.000			2.500			10.300
	3							0
	4							0
	5							0
SUBTOTAL		7.000	0	0	2.500	0	0	10.300
[illegible] SPRING	1	12.300						12.300
	2							0

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	3							0
	4							0
	5							0
SUBTOTAL		12.300	0	0	0	0	0	12.300
[illegible]	1	7.800		5.000				12.800
	2							0
	3							0
	4							0
	5							0
SUBTOTAL		7.800	0	5.000	0	0	0	12.800
[illegible]	1	12.300						12.300
	2							0
	3							0
	4							0
	5							0
SUBTOTAL		12.300	0	0	0	0	0	12.300
INDIAN CREEK	1	12.300			2.500			14.800
	2							0
	3							0
	4							0
	5							0
SUBTOTAL		12.300	0	0	2.500	0	0	14.800
[illegible] VALLEY	1	7.800						7.800
	2							0
	3							0
	4							0
	5							0
SUBTOTAL		7.800	0	0	0	0	0	7.800
[illegible] WATER	1	12.300		5.000				17.300
	2							0
	3							0
	4							0
	5							0
SUBTOTAL		12.300	0	5.000	0	0	0	17.300
[illegible]	1	7.800						7.800
	2							0
	3							0
	4						225.560	225.560
	5						1.127.800	1.127.800
SUBTOTAL		7.800	0	0	0	0	1.353.360	1.361.160
PEACH SPRINGS	1	12.300						12.300
	2							0
	3							0
	4							0
	5							0
SUBTOTAL		12.300	0	0	0	0	0	12.300
[illegible] WELL	1	7.800		5.000				12.800
	2							0
	3							0
	4							0
	5							0
SUBTOTAL		7.800	0	5.000	0	0	0	12.800
[illegible]	1	12.300						12.300
	2							0

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                 3                                                              0
                 4                                                              0
                 5                                                              0
SUBTOTAL               12.300       0         0         0         0         0   12.300
SECTION 8        1     12.300              5.000                                17.300
                 2                                                              0
                 3                                                              0
                 4                                                              0
                 5                                                              0
SUBTOTAL               12.300       0      5.000        0         0         0   17.300
[illegible] SPRINGS 1                                                          0
[illegible] HOUSES 2    7.800                                                    7.800
                 3                                                              0
                 4                                                              0
                 5                                                              0
SUBTOTAL                7.800       0         0         0         0         0    7.800
STANDING ROCK    1     12.300                                                   12.300
                 2                                                              0
                 3                                                              0
                 4                                                              0
                 5                                                              0
SUBTOTAL               12.300       0         0         0         0         0   12.300
[illegible]      1                                                              0
                 2      7.800                       2.500                       10.300
                 3                                                              0
                 4                                                              0
                 5                                                              0
SUBTOTAL                7.800       0         0     2.500         0         0   10.300
[illegible]-IN   1     12.300                       2.500                       14.800
[illegible]-IN   2                                                              0
                 3                                                              0
                 4                                                              0
                 5                                                              0
SUBTOTAL               12.300       0         0     2.500         0         0   14.800
TOTAL                 228.900       0    30.000    12.500         0 1.333.360 1.624.760

PL [illegible]-550 FUNDED
TOTAL-YEAR 1     155.300
TOTAL-YEAR 2     116.100
TOTAL-YEAR 3           0
TOTAL-YEAR 4     225.560
TOTAL-YEAR 5   1,127.800
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AGENCY AUTHORIZATION-BLM
ADMINISTRATION-MANAGEMENT

[illegible]	YEAR	MGT PLANS	SITE PROTECTION	DATA BASE NEEDS	VISITOR USE	STABILIZATION	SIGNS	WITHDRAWALS	TOTAL
[illegible]	1								0
	2								0
	3								0
	4								0
	5								0
SUBTOTAL		0	0	0	0	0	0	0	0
HALFWAY HOUSE	1	10.000	3.000	1.000					14.000
	2		3.000	5.000					8.000
	3		4.000	7.500		800			12.300
	4		4.000	2.500					6.500
	5		5.000	2.500					7.500
SUBTOTAL		10.000	19.000	18.500	0	800	0	0	48.300
[illegible]	1								0
	2								0
	3								0
	4								0
	5								0
SUBTOTAL		0	0	0	0	0	0	0	0
KIN NIZHONI	1		5.000	7.500				2.500	15.000
	2		5.000	12.500		7.500		3.000	28.000
	3		7.500	10.000		5.000			22.500
	4		7.500	5.000		500			13.000
	5		7.500	5.000		500			13.000
SUBTOTAL		0	32.500	40.000	0	13.500	0	5.500	91.500
LAS VENTANAS	1		3.000	10.500			100		13.600
	2	12.500	3.000	2.000					17.500
	3	15.000	4.000	2.500					21.500
	4		4.000	3.000					7.000
	5		5.000	3.000					8.000
SUBTOTAL		27.500	19.000	21.000	0	0	100	0	67.600
MORRIS 41	1								0
	2								0
	3								0
	4								0
	5								0
SUBTOTAL		0	0	0	0	0	0	0	0
PIERRE S SITE	1	7.500	3.000	2.000					12.500
	2	10.000	3.000	2.000					15.000
	3		5.000	7.500		9.500	500		22.500
	4	15.000	15.000	25.000				10.000	65.000
	5		7.500	5.000	5.000				17.500
SUBTOTAL		32.500	33.500	41.500	5.000	9.500	500	10.000	132.500
SAN MATEO	1								0
	2								0

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            2                                                          0
            4                                                          0
            5                                                          0
SUBTOTAL            0        0        0       0        0      0     0       0

[illegible] 1       8.500    5.000    1.000                                14.500
[illegible] 2         -      5.000    5.000           5.000    250          15.250
            3                7.500    5.000          15.000                27.500
            4              - 7.500    3.000                                10.500
            5                7.500    3.000                                10.500

SUBTOTAL            8.500   32.500   17.000       0  20.000    250     0    78.250

TOTAL              78.500  136.500  138.000   5.000  43.800    850 15.500  418.150

TOTAL-YEAR 1       69.500
TOTAL-YEAR 2       83.750
TOTAL-YEAR 3      104.300
TOTAL-YEAR 4      102.000
TOTAL-YEAR 5       56.800
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[illegible] PL [illegible]-550 AUTHORIZATION-BLM

		LAND SURVEY	EASEMENTS	COOPERATIVE AGREEMENTS	EXCHANGES	FEE PURCHASES	VISITOR FACILITIES	TOTAL
[illegible]	1							0
	2							0
	3			5.000	36.400			41.400
	4			5.000	36.400	445.000		486.400
	5	12.000						12.000
SUBTOTAL		12.000	0	10.000	72.800	445.000	0	539.800
[illegible]	1	5.000		5.000				10.000
	2		2.000					2.000
	3		7.000					7.000
	4							0
	5							0
SUBTOTAL		5.000	9.000	5.000	0	0	0	19.000
[illegible]	1			5.000				5.000
	2			5.000				5.000
	3	7.500						7.500
	4							0
	5							0
SUBTOTAL		7.500	0	10.000	0	0	0	17.500
[illegible]	1	7.500		7.500				15.000
	2		2.000					2.000
	3		3.000					3.000
	4							0
	5							0
SUBTOTAL		7.500	5.000	7.500	0	0	0	20.000
[illegible] VENTANAS	1				27.900			27.900
	2	10.000			27.900	12.800		50.700
	3							0
	4							0
	5							0
SUBTOTAL		10.000	0	0	55.800	12.800	0	78.600
MORRIS 41	1							0
	2			5.000	14.500	127.500		147.000
	3			5.000	14.500			19.500
	4	7.500						7.500
	5							0
SUBTOTAL		7.500	0	10.000	29.000	127.500	0	174.000
PIERRE'S SITE	1							0
	2		2.000	7.500				9.500
	3	10.000	3.000					13.000
	4							0
	5							0
SUBTOTAL		10.000	5.000	7.500	0	0	0	22.500
[illegible]	1							0
	2			5.000				5.000

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	3			5.000				5.000
	4	7.900						7.900
	5							0
SUBTOTAL		7.900	0	10.000	0	0	0	17.900
[illegible]	1	6.500		8.000				13.500
	2							0
	3	-						0
	4							0
	5							0
SUBTOTAL		6.500	0	9.000	0	0	0	13.500
TOTAL		75.500	19.000	65.000	157.600	585.300	0	902.400
TOTAL-YEAR	1	71.400						
TOTAL-YEAR	2	221.300						
TOTAL-YEAR	3	47.300						
TOTAL-YEAR	4	501.400						
TOTAL-YEAR	5	12.000						

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Senator **Bingaman**. I wanted to ask one other question on the outliers, if I could. I had a report that one of the 33 outliers had been destroyed by looters, is that accurate?

Mr. **Kerr**. I think that is an accurate statement, but that looting was taking place prior to the time the legislation was passed. I think it is more forty-one sites north of Aztec, NM. It is on private land and the only way for the Federal Government to get that is through donation, I think, or exchange. Obviously there is no way then that the owner is unwilling to donate or exchange that land that we can get—the Federal Government can take over the protection of that site. I think the looting, if that is the correct term on that site, probably continues today. It is the owner's intent to do what he wants with it, with his private property. Is that right, Matt?

Senator **Domenici**. Let me say, Jeff, Senator Bingaman, a number of these sites were actually found in neglect by private companies, I guess Public Service was the principal one, and private lands that are up there for future development had these outliers on it, on the various pieces of land. Some very large pieces of land, and the way we developed the scheme, clearly those major private companies with large holdings were put in a position where it would be advantageous for them to swap with the Federal Government so that those outliers would come within the purview of various agencies and because the companies' goals were to block in their own land for future development and it was being made very difficult for them to develop for coal and other purposes, and that worked to a substantial degree in the area.

This one was outside of it and being abused when we had the hearings, and unless we were willing to go out and condemn it and buy it, it was subject to what I just described and I assume it will remain that way for awhile longer. Most of them are not that way because you have been managing them, is that correct? They are not being looted, now, to your knowledge, are they?

Mr. **Kerr**. Not to my knowledge.

Senator **Domenici**. I don't think that I had any other questions, other than to get some further testimony on paleontological. Why don't you start up here and I have two more questions. I am reminded I should have talked about them. As far as the Chaco Park itself, I understand that we will hear tomorrow from Santa Fe that the land exchange provisions are presently being thwarted or stuck, so to speak, because the Department of Interior in Santa Fe and others just cannot complete the exchanges and now there's a task force being recommended to expedite all the exchanges and GAO has been looking at the exchanges, especially dealing with Santa Fe's numerous land exchanges. Can somebody bring us up to date on whether or not we have a problem we have to address, or is it going to get worked out?

Mr. **Luscher**. I believe we are moving ahead very well on that project, involving Santa Fe, the National Park Service and the BLM. We have had some delays in the process. We made a couple of false starts a while back, but things are on track now and I anticipate that there is nothing unforeseen in the future, and that the exchange should be consummated and squared away probably in March or April of this next year.

Senator Domenici. Am I correct that Santa Fe is going to testify today and they have a contrary view?

Mr. Muniz. Yes. They have some problems they will bring out.

Senator Domenici. You mind just being around a little bit so we can be sure we get that for the benefit of the Senators that are here. Before I go to the paleontological problem, let me talk a little bit with the Forest Service representative here. This lawsuit, *Save the Jemez* v. *Block,* can we talk about it a little bit? I know there's a case in the court and it's not my intention in any way to prejudice that, but let me give you my general view of it. As I said a moment ago, it is that more damage is coming in the area that we are concerned with by us not completing our work. We do not precisely know what we are trying to save, and thus, legal activities are causing more paleontological and archeological things to get destroyed, I'm not now suggesting that every bit of everything that everyone thinks ought to be saved. I'm not saying that.

It seems to me that the next biggest problem is our inability to resolve broad disputes and thus we are holding up everything. Not only do we get involved in stopping activities in the paleontological and archeological area, but we stop other kinds of activities, the development of water, the development of some kind of resource. So I am particularly interested in whether they have made this too complicated for the Department to get its job done, or why do we find ourselves in the *Save the Jemez* v. *Block* predicament? I wanted to say right off, I don't think it's all your fault, either. I think you all did some things that weren't exactly as they should be, but other participants in this might not have acted totally correctly, either. Can you give us your version with any recommendations and suggestions if you have any?

Mr. Muniz. I don't think there are any basic needs or changes that need to be made in the act itself. I think the acts and the promulgating regulations are fairly explicit. Some of the words, for example, what is the definition of an undertaking. Even that can be reasonably worked out. I think it's a matter of the execution of how we do our work, frankly. I think we did have some work that was authorized without following the compliance procedures and we were rightfully reminded by the interested public that we were not following our own regulations. From that standpoint, had we been following existing regulations as diligently as we intend to pursue them now, we wouldn't be in the problems that we are faced with right now. I think in the matter of our describing for ourselves and to our interested public and other affected entities, just what our procedures are going to be, how we are going to conduct our business, how we will see compliance, I think it's just a matter now of moving forward constructively and positively, establishing those procedures that are reasonable and prudent from our standpoint and hopefully, in that reasonable prudent area, we can get agreement from people who are concerned with some of the sites.

Senator Domenici. You are reasonably confident that one way or another within the foreseeable future, that that whole issue can be resolved?

Mr. Muniz. I'm very hopeful of that, and again there's no specific recommendation that I would make to you or other Members of the Congress that the problem lies within difficulty with the act's language, because I don't believe that's where the problem is.

Senator BINGAMAN. I gather there's also been a lot of controversy surrounding the agency's management plan for the Santa Fe National Forest. Could you give us your status report on that and what actions are being taken to resolve some of that controversy?

Mr. MUNIZ. The current status of the Santa Fe is the draft environmental impact statement and draft plan are out or will be out on the street shortly. This draft plan provides management direction for the next 10-year period of time on the Santa Fe National Forest. The purpose of the draft environmental statement, and the draft plan is simply to get the reaction from all interested publics and all interested governments to the information as we have displayed it in the draft environmental statement and also some of the conclusions that we have in the draft plan. I think there's ample opportunity, Senator, for anyone to react to the positions, our data, and the trends that we have described in those environmental documents. There's ample opportunity for the public to communicate with us while we are in that period between the draft plan and the final plan.

Senator BINGAMAN. Did I understand that you are having hearings to get this input from the public on your—what's the process by which you get the response?

Mr. MUNIZ. A series of public meetings. To my knowledge, we haven't scheduled any public hearings, per se, where there would be a documented verbatim record. I don't know if we have planned that for the Santa Fe Forest. There will be ample opportunity to meet with the supervisor of the Santa Fe National Forest, as well as communicating with us.

Senator BINGAMAN. You will expect public meetings of some kind?

Mr. MUNIZ. I think the supervisor of the Santa Fe National Forest is in the audience. Could I have him respond to that question, please? Mr. Maynard Rost, the supervisor of the Santa Fe National Forest.

Mr. ROST. We have been in the process of replanning the Santa Fe Forest. We have had numerous public agency and constituent meetings over the past year-and-a-half. You maybe recall the Santa Fe Forest plan was withdrawn about 2 years ago and since that time we have been replanning it.

Senator BINGAMAN. There will be additional meetings or hearings once this draft—has this draft been issued that was referred to?

Mr. ROST. It will be out in about 2 months.

Senator BINGAMAN. After this there will be additional meetings?

Mr. ROST. Numerous meetings.

Senator BINGAMAN. Senator Domenici had to leave for a few minutes. The BLM was going to talk about the paleontological resources issue. So perhaps we could get a description of that before we dismiss this panel or do you folks want to be dismissed here? Why don't we go ahead. I did not get your name.

Mr. LUSCHER. Matt Millenbach is the BLM area manager in Farmington, NM.

Senator BINGAMAN. What could you tell us about BLM's position on paleontological resources in your area?

Mr. MILLENBACH. During the past 2 days we have been meeting with a committee from the National Academy of Sciences, which is a national group chaired by Doctor Ralph, who is from the University of Chicago, and a number of other people who are in the academic community. The meeting has been in Farmington in order to give the committee an opportunity to take a look at some of our field operations and how we do our permitting for various kinds of activities that occur on public lands. We instituted a field tour to the Fossil Forest and had a session with the committee to go over some of these things.

The committee is looking into two major issues, one is permitting and the other is access to the lands, as Doctor Lucas indicated, and how the permit process works. There are really three major concerns within the category of access to the lands. One is the issue of conflicts with other uses that are occurring on the lands. Most of the time, paleontological work involves relatively nonintrusive kinds of things, driving around, picking up fossils off the surface. But it can result in some fairly major excavations of the land and I think it is the kind of thing that we need to be regulating to ensure that when we do get into a major excavation, that it does not conflict with somebody else's use of the land, such as grazing or recreation or mineral development.

We have had a major conflict over the past year—conflicts in the wilderness and the Bisti Wilderness area up in the San Juan Basin and access across those properties. The statement of driving a jeep across lands without any vegetation on them describes that situation very well. We did have a permit application this summer from a professor from Auburn University to go into the Bisti Fossil Wilderness to study pursuant to agreements that we had with other groups here in the State, the Sierra Club, the Wilderness and others. We afforded those groups a 30-day period to review that permit application. The professor was very unhappy about it because he had to go back to Auburn, wait for the permit to be processed and then come back here and do his work.

We have the Fossil Forest area which has been set aside for special study under the San Juan Basin Wilderness Act. As you might expect, we have intense interest in that area, ensuring that any work that does go on there is consistent with that law. We did talk to the National Academy of Science committee about simplifying the permit process, but as was mentioned by Senator Domenici and others, we do believe it is an important part of our overall land management job to regulate that use to minimize the conflicts with other uses on the lands.

The second aspect of the permitting process the academic committee is looking at is more of an academic question than a professional question within the academy and professional community itself. And this gets into questions like the significance of the paleontological resources on the land, who is qualified to go out and extract these particular resources, and how do we figure out to whom we should give these permits and to whom we should not. There is quite a diversity of opinion among the community itself—the professional community—about the significance of the resources and the qualifications issue. We have asked them to put together some recommendations for us on developing regulations on this whole issue of how to assess those kinds of questions.

And the third thing that we are all considering—the professional part of it—is the question of storage of fossils which are removed from the public lands, and the question of how we keep track of them, much as the archeological artifacts that they are removing from the lands. We expect them to have a report to us but we are not quite sure when. After we receive the report, we would like to be able to take a look at that and develop a paleontological research management program within BLM that is a little more responsive to the needs of this special community right now.

Senator Domenici. Could I ask if that exchange of views and seeking of information from the academy and thus the paleontological experts in the country has started just lately?

Mr. Millenbach. The committee was set up a couple of years ago, as I understand it. The only reason I know about this is they came to Farmington to take a look at our field operations and I sat in on their meetings for the last 2 days.

Senator Domenici. How about working with them? When did that start with the paleontologists, to try to better define their needs?

Mr. Millenbach. As I understand, that has been going on for a couple of years. There was a meeting in Farmington in 1981 to take a look at some of the specific issues related to coal development in the San Juan Basin and to try to get a handle on the significance of the fossil resources up there. One of the outgrowths of that committee was this National Academy of Sciences' committee which has been in existence for, I believe, a couple of years. They have had two or three meetings prior to this.

Senator Domenici. The reason I asked that, some hour and a half ago I put that April 15 newsletter in the record from the president of the Paleontological Society, and maybe I didn't read it right, but it was to the White House and it said that the Paleontological Society, the Society of Vertebrapaleontology and the State of New Mexico all volunteered help to the BLM in drafting information on the policy, but all offers of help were rebuffed. Is that correct?

Mr. Millenbach. I have a copy of the letter. I am not involved in the regulations writing part of it. I do know that they have had meetings. The committee I am talking about is a committee of the National Academy of Sciences, and if you would like I have a copy of the membership of that committee that I could give to you.

Senator Domenici. I understand. We put your current drafted statement in, but that's not you, that's them. I wasn't referring to that. I was referring to the interaction between them and you as you develop regs and you are not the one that puts the regs together so you don't know the answers.

Mr. Millenbach. That is right.

Senator Domenici. Who would?

Mr. Luscher. At the national level?

Senator Domenici. I don't know that that's the end of the world but maybe we will ask them which is true. Do you have anything further?

Senator Bingaman. No.

Senator Domenici. Where is our university professor? Did I understand correctly, I was talking to a paleontologist the other day, and he said that the issue of what a paleontological find means and what you can conclude from it is at least as old as Di Vinci or older and that he found, high on a mountain in a rock, evidence of a fish in the rock and he had to present the case before a group of scientists because he concluded, therefore, there was water up there and he had a competitor who said that isn't true. A bird flew up their and crashed into the rock and that's why it's there and Di Vinci lost, the other fellow won. Is that true?

Dr. Lucas. Not having been there, I'm unable to comment on that, but we certainly have—there certainly have been disagreements in any science. I think the archeologists would be quick to point that out, but we have advanced a little in our paleontological understanding since Di Vinci.

Senator Domenici. That's why I raised the issue. I didn't think it was all so difficult, these days.

Dr. Lucas. I think that one thing you are hitting on, is many, many more archeological and paleontological. What makes a significant resource or significant find is really the professional judgment of a qualified scientist, and of course, professional judgments vary from scientist to scientist, just as their political points of views differ elsewhere, and so there have been arguments about the significance of the Fossil Forest, for example, which Mr. Luscher pointed out has been, by many paleontologists, thought to be quite significant. Others have said it's not. I think what I would say is it's clear that in New Mexico, particularly the San Juan Basin, there are some extremely significant scientific resources from a paleontological point of view. Some of the most significant resources occurring in the Bisti and De-na-zin Wilderness areas.

One thing I would like to point out in designating those wilderness areas, which I believe was done by a bill introduced by Senator Bingaman and Congressman Richardson in this State, it essentially, on paper, now states that it's going to be impossible, or virtually so for paleontologists, to drive into those areas to do any collecting. Of course, this is going to make it very, very difficult, if not impossible, for paleontologists to collect dinosaur materials which cannot be removed on one's back but have to be removed by mechanized vehicle from these areas. And I would like to think it was not the Senator or the Congressman's intention that paleontologists be, in a sense, locked out of the business sty, but I think that unless BLM forges and appropriate management with some flexibility in it to allow paleontologists to collect in this area with vehicles, that the result of the wilderness designation for these areas will be essentially lock out dinosaur collecting paleontologists from this area.

Senator Bingaman. Let me just ask, is it your thought that the statute prohibits BLM from putting together a management plan that permits what you need to be done, done?

Dr. Lucas. Again it's in the spirit of the letter of the law. My experience with the Federal bureaucracy is that BLM land managers always follow the letter of the law if there is any degree of doubt and if they feel they will be subject to criticism for their decision. I think there is some flexibility. My understanding is that it would be very easy for a rider to be attached to that legislation which would permit an exception for paleontologists with, I would hope, BLM regulation of that, but my understanding of the law is that if it's interpreted literally, paleontologists should be allowed in the area.

Senator Bingaman. Where were you when it was being written? With the Bisti bill, you were saying it didn't provide for your concerns. Where were you when we were writing it?

Dr. Lucas. I was certainly in favor of the Bisti being made or protected in some way. The problem is that it seemed imperative for the Federal Government to somehow set aside the business stay and disdain. There were very few vehicles to put it in from the point of view of restricting vehicle traffic. The wilderness act seems an inappropate vehicle.

If there had been a more appropriate vehicle, I wish that had been chosen, but it was really a matter of whether you saved the area or didn't at that point so I favored saving, and I would hope that BLM would form a reasonable management plan for that area to allow paleontologists to continue exploring. I hope you will agree with this, Senator, paleontology,—I think, is the primary reason why the Bisti and De-na-zin Wilderness areas are set aside. It is the main resource, the high profile resource from the public point of view. I can't think of another resource there that figured more in the publicity and the debate about saving that area.

Senator Domenici. Well, I think you are correct. I think that's why and I think that the ultimate settlement of that issue never really did hinge on those two areas, but rather hinged on, in addition to those two, what else and what has been resolved, not to everyone's satisfaction. I would just suggest that before the distinguished professor from Auburn, if that's where he was from, and those associated with him blame the Bureau for that 30-day referral period, that they ought to clearly understand that it is very difficult in a wilderness or wilderness study area not to live up to commitments established by regulation with reference to who is going to have input. If somebody walks into New Mexico and wants to go into that area because they are great scientists and think they can go in tomorrow morning, they would have a lawsuit the next day unless the group of people really thought that was all right. And they can't take that chance, and we have been through that so many times that it's not going to happen.

We ought to try to resolve the issue because it was set aside principally for that and if it's now a total—substantial inhibitor, we will work on it. But I tell you, it won't be so easy to put a rider on a wilderness area that you go into with vehicles under an appropriate plan with paleontologists. It will take us more than a couple of weeks, I assure you.

Dr. Lucas. If I could ask a question, Senator. One thing that's unclear to me now is why there is an internal BLM policy that requests for paleontological permits in the wilderness and wilderness study areas have to be reviewed by the members of Sierra Clubs, The Wilderness Society or other environmental groups? It strikes me that this quandary into a special interest group sets a dangerous precedent, particularly since it raises a couple of questions. One is, where will we draw the line with special interest groups that can pass judgment on paleontological permitting, and I'm wondering whether the loyal majority, if it takes part in the BLM process, will be able to exclude paleontologists from collecting.

The second issue it raises is, of course, the Sierra Club, The Wilderness Clubs have no demonstrated expertise in paleontology and it's my question why they, if anybody, should be allowed to comment on paleontological permitting. First of all, there is a code among paleontologists about the confidentiality of their located information, and by having nonprofessionals review these permits and nonprofessionals outside the Government, there is, I think, a great fear that confidentiality of information will be violated.

Mr. LUSCHER. Would you like me to respond?

Senator DOMENICI. Sure.

Mr. LUSCHER. First of all, under NEPA, anytime we get into environmental assessments and deal with the Environmental Policy Act, those are all public documents. And we go out of our way, in fact, on all actions we take, whether it is on grazing, mining, whatever, to get public input and public reaction to our assessments, to our final decisions. And in that vein, I personally look at the paleontological community as no different than the wilderness community. They are all special interest groups who are interested in looking at those things. We are going to give all of them an opportunity which is required under the law to have their input to whatever actions take place on public lands. We are the people who are carrying out the will of the people as expressed by the Congress of the United States and not on our own determinations of what we think is best for the land.

Senator DOMENICI. Let me ask a question in response to his observation and thought. When someone said it was submitted for 40 days to the Sierra Club did they mean that literally, or was it submitted 30 days for public comment by them and, such as private sector interests and others, or did you literally mean that those two groups were asked to comment in 30 days? Which was it, do you know?

Mr. LUSCHER. I believe those two groups were given a special time to look at that because of the involvement with the wilderness and the State of New Mexico.

Senator DOMENICI. State of New Mexico as an entity, or some department?

Senator BINGAMAN. I believe it's the Department of Natural Resources in the State of New Mexico.

Senator DOMENICI. Do you have anything further, Jeff? I thank you all very much. We appreciate it.

Mr. LUSCHER. Just in final, I did set this map up here but I did not get a chance to talk about it. You might be interested in going further, but those are the archeological sites found in New Mexico, as far as the Bureau of Land Management and the State Historic Preservation Officer are concerned. We have identified them. That is about a 3-to-5 percent survey for the State of New Mexico.

Senator DOMENICI. Now, which are they?

Mr. LUSCHER. These are the black dots. Each one of those is a site. We have this digitalized in cooperation with the State and can print out on maps such as this.

Senator **Domenici**. Do you have a small one of these? Could we make the small one a part of the record? Give it to us and we will make it a part of the record and attach it to his testimony.

[Subsequent to the hearing the Bureau of Land Management submitted the following:]

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
NEW MEXICO STATE OFFICE
Post Office and Federal Building
P.O. Box 1449
Santa Fe, New Mexico 87504-1449

IN REPLY REFER TO:
8100 (932)

FEB 13 1986

Ms. Ann Femia
308 Dirksen Senate Office Building
Washington, DC 20510

Dear Ms. Femia:

Per your request, we have enclosed an additional copy of a background paper describing recent accomplishments within our Cultural and Paleontological Programs. Also enclosed is a map which depicts those sites which have been coded and entered into the New Mexico Laboratory of Anthropology's Archaeological Records Management System. So far, 45,000 archaeological sites have been entered into this Statewide data bank. Some 8,000 BLM sites have been coded to date and another 18,000 BLM site records are being forwarded to the Lab for entry. Our involvement in this important data bank is described in the enclosed report under the title Data Synthesis/Geographic Information System.

We understand that this material will be entered into the record of the Senate oversight hearings which were held in Albuquerque, NM on October 14, 1985. Thank you for your interest in our programs.

Sincerely,

David A. Jones

David A. Jones
Deputy State Director
Lands and Renewable Resources

Enclosures (2)

New Mexico BLM Cultural Resources Management Program

Over the past several years, the BLM in New Mexico has initiated a number of innovative actions designed to increase the efficiency and effectiveness of the Cultural Resources Management Program. A brief description of actions taken include the following:

1. Data Synthesis/Geographic Information System

This automated computer data base system for managing archaeological sites was initiated in the Farmington and Carlsbad Resource Areas in 1983. One of the initial objectives was to examine the possibilities of designing the most efficient inventory strategies in the two main oil and gas areas of the State.

The rationale for developing this computerized data base was that while thousands of inventories of well pads and access roads had been completed in these areas, no attempt had been made to synthesize the data from these surveys and to use this information to design the most cost effective survey methodologies geared towards the archaeological sensitivity of an area. Hence, the project title was derived from the ultimate goal of the project, namely "data synthesis."

Thus, the overriding objectives of the project were:

1. To provide a means for the integrated evaluation and analysis of cultural resource site data, survey data and appropriate environmental information.

2. Using existing data, to provide the maximum amount of information possible concerning the nature and distribution of cultural resources in order to inform and guide resource allocation decisions in a multiple-use context, in a timely and cost-effective manner.

While the development of predictive models per se was not one of the primary project objectives, it is anticipated that the Bureau will eventually be able to generate models of past settlement systems once the requisite data bases have been entered into the system.

This data synthesis project is already being routinely utilized for the preparation of environmental analyses. To prepare such analyses, a cultural resource specialist can turn to the computer to generate a number of illustrative maps. These might include: a) a simple display of site location by site type with respect to the project area; b) a simple display of areas surveyed within the project area, together with a calculation of overall percent of coverage; c) a display of sites and surveyed areas with respect to environmental variability, together with a calculation of percent of coverage by environmental zone; and d) the calculation and display of site densities.

After it was determined that the data contents of the New Mexico's Laboratory of Anthropology site file would meet the needs of data synthesis, the BLM entered into what has proved to be a long-term and extremely fruitful cooperative effort with the Lab to develop the data synthesis project, avoid duplication of effort, develop compatible systems and make the results available on a large scale. The Bureau maintains the graphics data base by digitizing (computer plotting) survey locations on USGS topographic quads and pays the Lab on a fixed fee basis for actual site record encoding. The success of this effort does credit to both agencies and provides a model for similar cooperative efforts in other states.

2. Chaco Roads Study

This project was funded and developed by New Mexico BLM. This study devised a strategy for considering Chacoan roads in the context of its land-use policy decisions. Research was successfully directed towards the following goals: 1) a more explicit and consistent system for classifying roads; 2) an explicit methodology for testing the validity of roads as prehistoric features, identifying roads on the ground and documenting road segments; 3) a structure for understanding the informational potential for road associated sites and features which are not part of another community; 4) a comprehensive integration of past research; 5) an evaluation of the issue of road construction and the development of a methodology to test for and document its existence; 6) an evaluation of existing aerial photography to identify what factors affect road visibility and establish specific criteria for distinguishing prehistoric roads from other types of features; and 7) an evaluation of the records data base as it currently exists in aerial photography. The publication which resulted from this study has been widely circulated among Federal and State agencies in New Mexico, as well as interested scholars and the public. The study has provided invaluable guidance for the field identification of prehistoric roads, suggested procedures for recording and evaluating them and offered methods to mitigate the effects of development projects on these cultural resources.

3. Chaco Culture Interagency Management Group (IMG)

The New Mexico BLM has played a pivotal role in this interagency group whose mission is to implement Title V of PL 96-550. The IMG published its Joint Management Plan (JMP) in July 1983. It provided guidelines for the identification, preservation, protection, research, management and use of Chacoan outlying archaeological protection sites. The IMG designated the BLM as the lead agency to develop a consolidated budget proposal to implement the JMP. Individual agencies are now pursuing funds to fully implement this plan and provide for needed protection and management of these important Chacoan outlier sites. PL 96-550 designated 33 sites outside of Chaco Canyon for protection. These sites are located on BLM, Indian and private lands in the San Juan Basin. To date, New Mexico BLM has completed management plans on Zin Kizhoni, Twin Angels and Casamero sites, 3 of the 11 sites that BLM will be responsible for. It should be noted that these three management plans represent the only ones produced to date by any Federal or State agency.

4. Interagency Agreements

Over the last several years, the New Mexico BLM has aggressively sought to enter into memorandums of agreements or other interagency agreements which might improve the efficiency and effectiveness of our Cultural Resource Management (CRM) Program. Among the agreements consummated are:

(1) NMSO-151 (Interagency Agreement Between NPS, BIA and BLM) - The purpose of this Agreement is to coordinate with the different agencies

Enclosure 1-2

activities in inventory, evaluation and management, specifically in regard to Chacoan sites.

(2) Interagency Agreement Between BLM and FS - The purpose of this Agreement is to meet regularly to coordinate CRM studies and share data.

(3) Memorandum of Agreement Between the BLM and the New Mexico State Land Office (SLO) - The purpose of this Agreement is to facilitate an expanded Land Exchange Program with the SLO while still ensuring that the BLM's affirmative CRM responsibilities are met.

(4) NMSO-168 (PMOA Between the BLM and the SHPO) - The purpose of this Agreement is to streamline the Section 106 compliance process while still ensuring that cultural resources are afforded full consideration in BLM project planning and implementation.

5. Rio Puerco Report Completion Project

From 1970 to 1976, intensive research efforts were conducted in the Rio Puerco area by Dr. Cynthia Irwin-Williams, then affiliated with Eastern New Mexico University and currently with the University of Nevada. However, research was never completed in the area and no reports were published and distributed to the public.

To insure full dissemination of this information, the New Mexico BLM authored an innovative cooperative agreement with both Eastern New Mexico University and the University of Nevada. All three signatories agreed to contribute funds. The resulting publication will summarize research efforts, will explain the geologic and environmental conditions of the area and will present ceramic temporal seriation, lithic studies and locational analysis of Anasazi demographic patterns in this part of the State. The resultant publication is expected to represent a major advance in our knowledge of the prehistory of the north central portion of the State.

New Mexico BLM Paleontology Program

1. Paleontology Manual

The enclosed draft BLM paleontology manual discusses the authorities under which the Bureau manages these resources. It outlines how consideration for paleontological resources will be incorporated into our planning system and how the collection of paleontological resources will be managed. Finally, proposed means for conducting surveys, mitigation and curation are explained.

It should be emphasized that this is only a proposed draft manual. The Bureau is currently consulting with paleontologists from the National Academy of Sciences and final manual procedures will likely reflect this input.

2. Permitting

The New Mexico BLM processes several hundred new archaeological permits or modifications each year. In contrast, for FY 85, the Bureau issued only four permits for paleontological research in the State. None were in wilderness areas. Two were located in wilderness study areas and two on general public lands.

3. Paleontology within Wilderness Areas

It should be noted that the Bureau in New Mexico has never denied a permit to conduct paleontological research either in an established wilderness area or wilderness study area. Obviously, such fieldwork carried out in these special management areas must be carefully coordinated with the needs to protect wilderness values.

The BLM's Wilderness Management Policy was published September 24, 1981. The applicable section governing paleontological resources states (p. 28):

> "To the extent not inconsistent with the concept of wilderness preservation and the intent of the Wilderness Act, paleontological resources are available for recreational, scenic, scientific, educational, conservation and historical uses. Paleontological resources, in most instances, will be subject to the forces of nature in the same manner as other wilderness resources. Study or management will not normally include any excavation, stabilization or interpretation activities. Salvage of paleontological sites, excavation and collection of artifacts may be permitted on a case-by-case basis where the project will not degrade the overall wilderness character of the area and such activity is needed to preserve the particular resource. State Director approval is required for all such projects."

The Bureau is required by the National Environmental Policy Act to prepare an environmental analysis to evaluate whether the proposed research would compromise wilderness values.

When specimens need to be removed from these areas, the BLM will likely insist that nonmotorized methods, such as mule or horse pack trains or horse drawn wagons be considered first. Where these are not available or practical, the Bureau will consider on an exceptional case-by-case basis, the use of motorized vehicles to remove critically important specimens.

It has become apparent that there is some apprehension and misunderstanding concerning the manner in which BLM will manage paleontological resources within wilderness areas. However, the Bureau believes existing legislation and policy directive allow for sufficient flexibility to manage the paleontological resources in a responsible manner without compromising delicate wilderness values.

4. Fossil Forest Rules and Regulations

Final rules and regulations for the Fossil Forest within the San Juan Basin were published in the Federal Register on October 18, 1985. These regulations protect the valuable fossil resources through prohibition of free use of petrified wood collecting, closures to motorized vehicles and requirements for permits to excavate and remove fossils. The area was also closed to the operation of mining laws and to disposition under the mineral leasing laws and geothermal leasing laws, as of October 30, 1984, subject to valid existing rights. Penalties for persons willfully violating prohibitions under the regulations were also established.

5. Fossil Forest Long-Range Study and Interim Management Plan

In accordance with the San Juan Wilderness Act of 1984, the Bureau is currently preparing an Interim Management Plan and Long-Range Study for the Fossil Forest. The latter will describe the local environment and assess the significance of the paleontological resources. Their distribution will be described and measures proposed for managing fossils. Descriptions, assessments and conflicts with the management of other resources will be explained. Finally, proposed management actions and stages to implement the preferred management alternative will be presented.

6. New Mexico BLM and State of New Mexico Memorandum of Understanding (MOU)

Signed in August 1985, the Bureau regards this Agreement as a model of cooperation between the State, Federal Government and industry. It provides for the consideration and mitigation of fossil remains on BLM-managed coal mining leases. This MOU sets forth explicit procedures for a premining inventory and determination of significance, surface mitigation, mining mitigation and the preparation and curation of retrieved fossil material.

Senator **Domenici**. I had thought we would finish, but clearly we can't until we come back, so what do we have left? Panels five, six, and seven, you-all know who are on those panels. It's now a quarter of one. Why don't we, instead of taking as much time as we planned, could we get our lunch done in 45 minutes? Would that be all right with everyone? Let's break and we will come back at 1:30 and take the next panel in order.

[Recess was taken.]

AFTERNOON SESSION

Senator **Domenici**. Could we get started, please. We have the fifth panel, in terms of our original agenda. George Byers, director of public affairs, Santa Fe Minerals Corp.; Dan Dutton, President of Duke City Lumber, Albuquerque. Will you all just take the witness table up here. Doctor Mark Harlan, staff archeologist, Public Service Co. of New Mexico and Doctor Sterling Grogan, Navajo Mine, Fruitland. Let's start in the order that I announced. George, you want to start?

STATEMENT OF GEORGE BYERS, DIRECTOR, PUBLIC AFFAIRS, SANTA FE MINERALS CORP.

Mr. **Byers**. Thank you, Senator. I guess I find myself already on the hot seat with regard to the exchange for mineral estates in Chaco. I do want to clarify right now that maybe had you held this hearing about 3 or 4 months ago, I would have been able to express a great amount of frustration. Today, BLM is working very diligently toward completing this exchange, and I understood that it would be done in March or April of next year, and since late this summer we have been working extremely effectively with them. We have a hearing on Thursday of this week in Albuquerque on the coexchange and the exchange of the lands in Chaco, and we appreciate your and Senator Bingaman's support in the past and hope we can continue to count on it with this exchange.

I am director of public affairs of Santa Fe Minerals Corp. We are the hard minerals affiliate of Santa Fe Southern Pacific Corp. I believe we are the Nation's largest private land owner with almost 10 million acres of land in five western States, and over almost a 90-year period, we have worked with the Federal Government on a variety of national resource and cultural resource protection measures, and these chiefly involve land exchanges with the Coconino National Forest in Arizona, with the Grand Canyon, with the Petrified National Forest Park and in 1929, with Chaco Canyon.

And as mentioned earlier, we are working today on an exchange involving about 5,000 acres of lands in Chaco and beneath seven of the outlining archeological protection sites.

Senator Domenici, you mentioned earlier the Chaco Act was predicated on the recognition of a few things in the San Juan Basin. One of them being that there are mineral values up there which should be developed, and the other is that there are cultural resource values, the legacy of the Anasazi which should also be developed and interpreted. We think this exchange of our mineral estates is going to help accomplish that and we have been working, as I said earlier, with Bob Kerr and Bill Luscher and their staff on this.

The Chaco Act had a couple of very unique provisions with regard to exchange and how exchanges could affect cultural resource protection. First of all, the Act directed that exchanges be made where possible. The Act also directed that a pool of lands be established from which the private party might select lands of similar resource exchange for the lands which would be acquired and added to Chaco. And finally and most important, the Act provided that where the Secretary and the private party agreed on an exchange and where it had been found to be in the public interest, an exchange of less than equal value could be made, if the parties agreed.

The earlier exchanges which our company was involved in were easy, Senator, and they have gotten much harder in recent years. For one reason the BLM is under a great deal of scrutiny from the public to make sure that the public interest is looked after. I was talking a week or so ago with Glenn Collins, who used to be Assistant State Director for Lands with the BLM in Arizona; he now is in charge of the Federal, State Land Exchange Program for the State of Arizona. We agreed that today, there is a great deal of problems with exchange for a number of reasons. One is that one party might try to force an exchange on the other. Second, one of the parties might try to come out ahead, to come out way ahead in an exchange.

In our opinion, we have seen interest waning in exchanges because the appraisal methodology has evolved over a great deal of time into a very tedious and cumbersome process. It requires land reports, mineral reports, EIS's, land use plan amendments, consultations with governor's offices, public meetings and so forth, and this is chiefly because of the scrutiny that BLM is under and the requirements of section 206 of NEPA.

We found that there are sometimes interagency conflicts. An example might be where you have three parties involved. One to be a private party, one to be, say, the Fish and Wildlife Service, one would be the BLM, where land of the private party would go to the Fish and Wildlife Service, BLM land would come to the private party and in effect, making BLM a net loser of lands, and BLM asking, "What's in this for me? I'm losing lands. I'm not really gaining anything."

We have found that there has been a reluctance, but it's not really because the agencies are reluctant. It's because they have to be that way. A reluctance, though, to be innovative in evaluating lands and assessing values. An example of this is with our Chaco exchange. In Chaco and beneath the outliers, we own the mineral estates. Chaco was enlarged and outliers were designated in order to protect the surface values, and you are left with a catch-22 situation, how do you protect those surface resources if you want to go in and assess the mineral values by drilling on those lands.

The archeological conservancy proposed a unique method of evaluation. They suggested that it might be possible to establish a value for the minerals if the parties agreed, which would equal the mitigation value of the archeological resources across the surface, and this proposal was presented to the Department of the Interior, but was rejected because, simply, we have never done anything like this before

And finally, we have found that political considerations far removed from the actual exchange of lands also play a role. We are finding this has affected an exchange being, a 40-acre tract to be added to the Petrified Forest which has an Anasazi Ruin on its surface.

A few suggestions here to make exchanges easier. I believe that FLPMA, Section 206 should be amended to allow interstate exchanges to be made. Right now there's a prohibition on those exchanges; they can only be made within a single State. Next the BLM managers at the field level, at the district level, State directors, what have you, should have the support of their superiors in being able to make some appraisals using some innovative techniques. They really don't have that. I think they really do want it, but they don't have it today.

The concept in the Chaco Act should be extended, which included setting aside a pool of lands from which lands of similar resource character from which a selection might be made and finally, that provision in the Chaco Act for allowing exchanges of less than equal value to be made should be extended when the exchange has been found to be in the public interest and when the parties do agree on an exchange. Thank you very much.

[The prepared statement of Mr. Byers follows:]

STATEMENT
OF
GEORGE BYERS
DIRECTOR, PUBLIC AFFAIRS
SF MINERALS CORPORATION

On

THE USE OF LAND EXCHANGES IN CULTURAL RESOURCE PROTECTION

Before the
SUBCOMMITTEE ON PUBLIC LANDS,
RESERVED WATER AND RESOURCE CONSERVATION
OF THE
UNITED STATES SENATE

Albuquerque, New Mexico
October 14, 1985

Mr. Chairman, my name is George Byers. I am Director, Public Affairs for SF Minerals Corporation, a subsidiary of the Santa Fe Southern Pacific Corporation. Our affiliates, the Santa Fe Pacific Railroad Company and Cerrillos Land Company, own some 4.35 million acres of reserved mineral estates and 150,000 acres of fee lands across northern New Mexico and Arizona. Counting the fee lands and mineral estates of the Southern Pacific Land Company which we now manage in Utah, Nevada, and California, we are the nation's largest private land owner with nearly 10 million acres of lands in the American West.

I wish to begin my comments today by briefly describing some of the cooperative efforts of the Santa Fe Pacific Railroad Company, the Bureau of Land Management, the U. S. Fish and Wildlife Service, and the National Park Service in using land exchanges to facilitate better land management and resource protection, including cultural resources, in the numerous mixed ownership areas of these five states.

Santa Fe's own recent experience has seen the Federal Government propose exchanges to answer a variety of land use needs, from expanding bombing ranges to protecting lands where desert bighorn sheep live to protecting archaeological sites. Santa Fe -- and most private parties -- propose exchanges to the Government in areas where the Federal Government's presence restricts the economic potential of the intermingled private lands.

Santa Fe Pacific's involvement with exchanges of land with the Federal Government goes back to its beginning years in the late 1890's, at which time the United States was formulating the policy of setting aside permanent forest reservations. One of the first formal exchanges was completed in 1902 when President Theodore Roosevelt signed an agreement involving the exchange of over 500,000 acres of Santa Fe Pacific lands in what is now the Coconino National Forest. These lands are in the vicinity of the San Francisco Mountains north of Flagstaff. In return for these lands, Santa Fe Pacific Railroad Company received approximately 150,000 of in-lieu lands in Arizona.

This exchange was followed by many others, the most notable of which was an exchange in which Santa Fe Pacific surrendered 375,000 acres of land in the Grand Canyon Reserve for approximately the same amount of federal lands elsewhere in Arizona. In 1929 similar exchanges were effected with the National Park Service in connection with rounding out the United States' holdings in the Petrified Forest National Park in Arizona, and here in New Mexico in establishing Chaco Canyon National Monument.

But these exchanges were the early ones, and they were the easy ones. Today's exchanges are more difficult, time-consuming, and expensive -- both for the Federal Government and for the affected private party. The BLM, under intense scrutiny on every side, must meticulously examine all exchange proposals to satisfy itself that "public interest" values are being preserved -- indeed, are being enhanced -- and that equal values in the property interests are being exchanged. Over time, appraisal methods have evolved in response to these requirements into a labyrinthine, tradition-bound, and mysterious process requiring mineral reports and land reports, public meetings, land use amendments, Governor's consultations, title opinions, and environmental assessments. It is also a process whose steps have become so hard-set by time that innovation in unusual circumstances is virtually impossible. When more than one agency is involved, inter-agency turf protection also plays an important role.

Let me give you an example.

Today, in an exchange authorized in 1980 by Title V of Public Law 96-550, Santa Fe Pacific is working very closely with BLM and the National Park Service on an exchange of Santa Fe Pacific's reserved mineral interests within Chaco Culture National Historic Park and seven outlying ruins in northwest New Mexico. BLM will hold hearings on Thursday in Albuquerque on this exchange. This exchange, authorized in 1980 by Title V of Public Law 96-550, will carry out some of the purposes of this Act by clearing up the major mineral inholdings which remain in Chaco.

As a coauthor of Public Law 96-550, Senator Domenici may recall that the efforts of all who worked for the passage of the law were predicated in large part on the understanding of the immense value to present and future generations of preserving the most highly developed and complex prehistoric culture in the western United States. This exchange will ensure complete elimination of any mineral development possibilities which could damage the archaeological resources within Chaco Park and seven outliers. In all, 4,893 acres in Chaco Park and the seven outliers will be exchanged with the BLM in conjunction with the McKinley County Coal Exchange. I am pleased to report that the BLM schedule calls for completion of this exchange in early May, 1986.

Public Law 96-550 had several unique and very innovative features which I would like to highlight. First, the Act provided that exchanges of private land for federal land be given priority by the Secretary of the Interior for any acquisition of private lands at Chaco Canyon and the designated outliers needed to forestall mineral development potentially harmful to the ruins. The law further instructed the Secretary to attempt to acquire any private lands or interests by exchange prior to acquiring them by any other methods such as by condemnation. Next, for the purpose of completing the exchange, the Secretary was instructed to designate a pool of lands of at least three times the size of the private acreage to be acquired. This pool was to be comprised of federal property interests of a similar resource character to the property to be exchanged. Finally, the Act provided that any exchange would be made on the basis of equal value. But, in a provision unique to this Act, it was provided that if the parties agreed to an exchange, and the Secretary determines the exchange is in the public interest, then exchange can be made for less than equal value.

Unfortunately, the very uniqueness of this provision which allowed a less than equal value exchange to be made caused considerable concern within BLM. Simply because a less than equal value exchange had never been made before, BLM was understandably reluctant to undertake one with respect to the Chaco lands -- even with the full force of law behind them authorizing them to take this action.

Also complicating the exchange of mineral estates in Chaco between Santa Fe Pacific and the BLM was the fact that no surface lands were to be exchanged. A sort of "Catch-22" situation was created by virtue of the fact that while lands had been added to Chaco Park for archaeological protection, Santa Fe Pacific, BLM, and the Park Service were left scratching their heads looking for a way to determine mineral values while not disturbing through exploration activities the very archaeological resources which the Park had been enlarged to protect. Again, a unique solution was proposed, this time by the Archaeological Conservancy. This solution would have valued the mineral resources according to the mitigation value of the archaeological resources on the surface. Subsequent discussions with the National Park Service, the New Mexico Archaeological Society, and other consulting archaeologists led to their conclusion that this would be a feasible approach at valuation. It would inventory the cultural resources that would be disturbed if minerals were to be developed, but not the minerals themselves, and leave the resource undisturbed. However, upon presentation of this approach to the Department of the Interior, it was described as "novel," then rejected because "we have never performed an evaluation this way before."

In Arizona, BLM and Santa Fe Pacific are working on an exchange of even greater scope. This is a two-part exchange which would clear up some 24,000 acres of Santa Fe Pacific mineral holdings in the Grand Canyon National Park, as well as some 33,000 acres of our reserved mineral estates in four BLM WSA's. We would also like to work with BLM on an exchange of the 40 acres of mineral interests Santa Fe Pacific owns in the lands proposed to be added to the Petrified Forest National Park. Santa Fe Pacific has proposed that this 40-acre tract either be exchanged separately or in conjunction with the Grand Canyon and Wilderness Study Area exchanges. The mineral values of the land to be added to the Park and of the lands which Santa Fe Pacific has selected are unknown. Yet, should these lands be exchanged under the provisions of Section 206 of FLPMA, BLM must undertake its lengthy, expensive, and time-consuming evaluations of the property prior to making the exchange.

It is our experience that BLM has been able to accomplish exchanges with the States rather easily, but exchanges with private parties, especially of mineral estates only, can be quite lengthy and time-consuming. Santa Fe has observed that exchanges fail or become delayed for a variety of reasons. First, one party may try to force an exchange on the other. Second, one party may try to "come out ahead" on the value of the lands which it has selected. Or, the interest of one or other of the parties in completing the exchange may expire simply because of the excessive time consumed in studies, appraisals, adjustments, and counter-proposals required in determining equal value. Inter-agency conflicts are observed to interfere with three party exchanges which involve a transfer of BLM lands to a private party and a transfer of BLM lands to another federal agency. BLM would ask, "What is BLM getting out of all this?" In other words, BLM would be the net loser of acreage, while the other agency would gain acreage. Political considerations can stall an exchange, as Santa Fe Pacific discovered with the 40 acres involved in the Petrified Forest National Park. Finally, we have seen exchanges fail and be delayed, as stated earlier, because one party is too tradition- or regulation-bound to look at innovative methods of exchanging lands.

Now let me offer a few suggestions for improving BLM's ability to make these exchanges. First, Section 206 of FLPMA should be amended to provide for interstate exchanges of lands. Next, the concept in the Chaco Act of providing a pool of lands from which the private party may select in specific cases should be extended to all other exchanges. Appraisal methodology should be relaxed in order to give BLM authorities greater discretion and flexibility in exchanging lands of unknown mineral values. It makes no sense, and merely consumes time and money, for BLM to be required to conduct intensive surveys of nearby lands with similar mineral character before they can be judged to be exactly equal in value. In such cases, authority to make equal acreage exchanges would be desirable. Finally, the concept in the Chaco Act which authorized the Secretary of the Interior to exchange lands of less than equal value, when he finds such an exchange is otherwise in the public interest, should be extended on a broader scale. Officials on the State and District level should be assured of the support of their superiors when they attempt to utilize innovative techniques under a less restrictive reading of existing law.

Thank you for the opportunity to comment.

Senator DOMENICI. Thank you very much. Dan Dutton, president of Duke City Lumber Co.

STATEMENT OF DAN DUTTON, PRESIDENT, DUKE CITY LUMBER CO.

Mr. DUTTON. Thank you, Senator. I am Dan Dutton president of Duke City Lumber. Today I'm testifying on behalf of the National Forest Products Association, of which Duke City is a member. NFPA represents over 2,000 companies throughout the United States. Many NFPA members are dependent upon national forests, including New Mexico, for their raw material supply. As president of Duke City, my most pressing problem is the effect of the current Forest Service cultural resource management practices on timber availability. Due in part to the recent lawsuit *Save the Jemez* v. *Block*, filed against the Forest Service, the availability of timber has been dramatically reduced. The agency has been compelled to divert its efforts to the cultural resource issues raised in the litigation. The resulting shift away from well balanced, multiple-use management to an overemphasis on cultural resource management, if continued, will have a devastating effect on the timber industry in New Mexico.

Duke City's situation illustrates this impact. We rely almost exclusively on timber from national forests. Largely, as a result of the current controversy, no timber was sold on the Santa Fe National Forest this year. Currently, we have less than 1 year's timber supply for our two major New Mexico operations in Espanola and Cuba.

Unless additional timber sales are made available, these mills may be forced to stop operations within the next year. They represent 50 percent of the company's output of forest products, and 195 jobs in Rio Arriba and Mora Counties. Our Albuquerque facility will also be impacted since the Cuba and Espanola mills supply the majority of the material that are further processed here.

Moreover, the Forest Service ordered a temporary cease operations on two existing timber sales as a direct result of the litigation. At the time Duke City entered in these sales, we understood that one, cultural resource management requirements had been fulfilled, and two, that no further agency clearance would be necessary. However, since our contracts were awarded, the Forest Service has restricted our activities until the additional clearance can be obtained. Because of either manpower or funding shortages or the litigation, the Forest Service has been hampered in providing this clearance.

Cultural resource protection is important, justified and required by law, but not to the exclusion of other forest uses. They now request the wisdom of potentially qualified people for special consideration or the 100-percent survey required by the State and desired by the plaintiffs in the current litigation. The Forest Service is charged with the responsibility of managing the national forest for multiple uses.

The National Historic Preservation Act requires the Forest Service to implement the NHPA in a manner consistent with the agency's missions and mandates. Because of current restrictions due to the cultural resource requirements, the Forest Service has not been allowed to carry out all management responsibilities.

The Forest Service is doing a credible job of protecting cultural resources given the budgetary limitations that all Federal programs face. In order to continue our operations, we must be given a reasonable assurance that we will have a supply of timber. Unfortunately, the current litigation has limited this assurance. I would like to thank the subcommittee for their time.

[The prepared statement of Mr. Dutton follows:]

STATEMENT OF THE NATIONAL FOREST PRODUCTS ASSOCIATION REGARDING UNITED STATES FOREST SERVICE IMPLEMENTATION OF THE NATIONAL HISTORIC PRESERVATION ACT AND ARCHAEOLOGICAL RESOURCES PROTECTION ACT

October 14, 1985

My name is Dan Dutton. I am currently President of Duke City Lumber Company. I am testifying today on behalf of the National Forest Products Association ("NFPA"). Headquartered in Washington, D.C., NFPA represents over 2000 companies involved in growing, manufacturing, and distributing solid wood products throughout the United States. This industry provides over 700,000 direct jobs and many more indirect jobs. Many NFPA members are also dependent, in whole or in part, upon the National Forests -- including those in New Mexico -- for their raw materials supply. On behalf of NFPA, of which Duke City Lumber Company is a member, I would like to thank the Committee for its consideration of these matters that are of critical importance to the forest products industry in New Mexico.

We are concerned about the current implementation by the United States Forest Service of the National Historic Preservation Act, 16 U.S.C. §§ 470 et seq. ("NHPA") and its regulations on the National Forests in Arizona and New Mexico. As the new President of Duke City, the most pressing concern with which I am faced is timber availability and the effect of current Forest Service cultural resource management practices on timber supply. Due in part to two lawsuits filed against

Forest Service officials, Save the Jemez, et al. v. Block, et al., and State of New Mexico ex rel. Anaya v. Block, et al., U.S. District Court Cause Nos. CIV 84-1150 BB and 84-1166 BB (D.N.M) now consolidated for hearing, the availability of timber has been dramatically reduced while the Forest Service effectively has been compelled to divert resources, time, and concern to the cultural resources issues raised in litigation. Efforts by the Forest Service to improve efficiency in considering and protecting cultural resources have also been thwarted by delays in receiving consultation from, and requests for additional information by, the New Mexico State Historic Preservation Officer. The resulting shift away from well balanced, multiple-use management to an over-emphasis on cultural resource management, if continued, will have a devastating effect on the timber industry in New Mexico. This will happen unless the Forest Service is permitted to manage cultural resources in conjunction with all other resources -- including timber -- in the context of its multiple-use mandate.

The effect of the forthcoming timber shortage will be felt not only by Duke City, but also by very depressed parts of northern New Mexico, including Rio Arriba County with an unemployment rate of over 20 percent and Mora County with an unemployment rate of over 31 percent, according to a September 30, 1985, report from the New Mexico Employment Security Department.

As a major employer, both directly and indirectly, in northern New Mexico, Duke City's operations are critical to the welfare of those communities.

The situation of Duke City Lumber Company, Inc. provides an example of the present impact of current restrictive cultural resource management practices resulting from the litigation. Duke City relies almost exclusively on timber from National Forests. Largely as a result of the current controversy, no timber was sold on the Santa Fe National Forest this year. In addition, timber harvesting on existing timber sale areas has been hampered by cultural resource concerns. Currently, Duke City has less than one year's supply of timber on existing timber sales for its two major New Mexico mills, Espanola and Cuba. The U.S. Forest Service generally recognizes that a company needs to have a three year supply of timber for investment and planning purposes. The Cuba and Espanola mills represent approximately 50% of the Company's output of lumber and forest products. After that time, unless additional timber sales are made available, Duke City's Espanola and Cuba lumber mills may be forced to stop operations, even if the Forest Service allows Duke City to complete harvesting of its existing sales. In addition, Duke City's Albuquerque facility will also be impacted adversel since the Cuba and Espancla mills supply all materials for further processing at Albuquerque.

Duke City has been ordered by the Forest Service to temporarily cease operations on at least two timber sales within the last year as a direct result of cultural resource management concerns spawned by the litigation. At the time Duke City entered into these timber sale contracts, it was understood, based on conversations with the Forest Service, that: (1) archaeological clearances and cultural resource management requirements had been fulfilled; and (2) no further Forest Service or state agency clearance or approval, for cultural resource purposes, was necessary prior to the initiation of harvesting activities. However, since the contracts for these sales had been awarded, new rules appear to have been imposed, and the Forest Service has hampered or curtailed harvesting activities until additional archaeological clearance has been obtained. Because of either manpower and funding shortages or the impact of pending litigation, the Forest Service has been hampered in providing that clearance. In addition, the New Mexico State Historic Preservation Officer has sought to impose additional obligations on the Forest Service prior to initiation of timber harvesting. These obligations appear to include the inventory and protection of all cultural resources no matter how insignificant, including a few potsherds and so called "lithic scatters" which my foresters more aptly describe in lay terms as a few chips of obsidian from which arrowheads may be made. The result is that the Forest Service has been required since the outset of the lawsuit to concentrate on cultural resource management to the exclusion of other areas of multiple-use management.

In addition to problems on existing timber sales, obstacles to completion of new sales have created a critical problem. Duke City and other NFPA members rely upon the future sales of timber on National Forest lands for continued economically viable operations. The Forest Service, on an annual basis, provides timber operators with a schedule for each fiscal year concerning projected timber sales. For fiscal year 1985, running from October 1, 1984 through September 30, 1985, the Forest Service had planned to make at least five timber sales on the Santa Fe National Forest. However, due to cultural resource management difficulties, no timber sales were made, further restricting the timber available for harvest.

Protection of significant cultural resources is important and required by the NHPA and the Archaeological Resource Protection Act, but not to the exclusion of all other forest uses. We agree that sites such as Kwastiyukwa and others that are currently on (or meet the standards for inclusion in) the National Register are deserving of NHPA protection. However, we question the propriety of protection of all sites currently deemed worthy, or of the 100% survey required by the New Mexico State Historic Preservation Officer and desired by the Plaintiffs in the _Save the Jemez v. Block_ case. As you know, the Forest Service is charged with the responsibility of managing the National Forests for multiple uses under a variety of statutes, including the Multiple-Use Sustained-Yield Act, 16 U.S.C. §§ 528 et seq. (1976) and others. Further, the National Historic Preservation Act requires the Forest Service to implement the NHPA in a manner "consistent with the agency's missions and mandates." Because current emphasis is on cultural resource management and not multiple-use management, which is the Forest Services mandate, the Forest Service has not been allowed to carry out its full array of management responsibilities. That situation is inconsistent with the congressional intent behind both the NHPA and the other resource statutes governing Forest Service management of the National Forests.

In summary, we believe that the Forest Service is doing a creditable job of protecting cultural resources given the budgetary limitations that all its and other federal programs presently face. We believe further that timber sales can and have successfully been operated in areas where cultural resources exist without damage to those resources. However, in order to continue their operation, NFPA members -- companies like Duke City Lumber Company -- must be given a reasonable assurance they will have a supply of timber to purchase and harvest. Unfortunately, the current litigation has eliminated this assurance.

Thank you for your attention.

Senator Domenici. Your statement will be made a part of the record, as well as written testimony. I forgot to make that comment. Dr. Mark Harlan, staff archeologist, Public Service Company.

STATEMENT OF DR. MARK HARLAN, ENVIRONMENTAL SCIENTIST, PUBLIC SERVICE CO. OF NEW MEXCIO

Dr. Harlan. My name is Mark Harlan. I'm an environmental scientist with the Public Service Co. of New Mexico. I'm a professional archeologist and have worked in New Mexico for the last 10 years. My present opinion is the Public Service Co. of New Mexico programs are in compliance with the legislation and regulations which protect archeological sites. PNM is an investor-owned electric utility which serves roughly half the State of New Mexico. We have major generating and transmitting facilities in the San Juan Basin, one of the richest areas of archeological sites in the world.

It has been our experience that existing legislation and regulations when they are rationally applied, are both effective in protecting important archeological sites and compatible with the development of New Mexico's natural resources. Numerous construction projects carried on by PNM over the last 15 years since preservation programs have been in place has been successful in avoiding serious adverse effects to archeological sites. This has been made possible by including consideration of our archeological sites early in the planning process, and by achieving effective cooperation of the land-holding agencies which have responsibility to protect archeological sites.

The only serious problem we have encountered in our archeological compliance programs center on the lack of consistency in controlling the agencies and the way that they interpret and enforce the basic laws and regulations. Although all regs are supposedly working from the same basic set of regulations put out by the advisory council on historical preservation, there's a wide range of obligations different agencies place on applicants who wish to carry out actions on Federal lands.

We suggest that the agencies be encouraged to communicate more effectively among themselves and develop mechanisms to achieve consistency and the measures that they use to protect New Mexico's rich archeological heritage. Thank you, Senator.

Senator Domenici. Thank you very much. Dr. Sterling Grogan, Navajo Mine, Fruitland.

STATEMENT OF DR. STERLING GROGAN, MANAGER, ENVIRONMENTAL SERVICES, UTAH INTERNATIONAL, INC.

Dr. Grogan. For the record, Senator, I don't have a doctor's degree. I just work for industry.

Mr. Domeninci. They put it down here this way. That's staff, but they did a pretty good job.

Dr. Grogan. Senator Domeninci, Senator Bingaman, other members of the subcommittee, my name is Sterling Grogan. I work for Utah International, Inc., at the Navajo surface coal mine near Farmington, NM, where I am the manager of the environmental services. My comments today are made on behalf of the company. I want to thank you for this opportunity to testify. I wish only to make one major point about paleontology, and then I would be very pleased to answer any questions you might have.

I think the thing that needs to be emphasized following the discussion this morning is that there is a large body of often conflicting, as we heard this morning, often conflicting Federal and State laws and regulations governing the management of archeological resources, while there is no such body of laws and regulations controlling paleontological resources. This is exactly the way it should be for now. The National Academy of Sciences' Committee on Paleontological Collecting, which was referred to several times this morning, in its final report, which should be released sometime in late 1986 or early 1987, may recommend further legislation or regulation. Those are specific topics for consideration by the committee. However, until that committee has completed its work, new legislation or regulations dealing with paleontology are not advisable.

The most pressing problem in paleontology today is the lack of communication and coordination among the Federal agencies in the Departments of the Interior and Agriculture over the permitting of paleontological research, paleontological research done on Federal lands, Federal and State lands. However, we are specifically encouraged by the progress made today by the National Academy of Sciences committee in its discussions with the Bureau of Land Management, and we are optimistic about the chances for resolution of the problems that you heard discussed today.

Bureau of Land Management officials in New Mexico and in Washington, DC, have been cooperative lately in attempting to work out mutually satisfactory procedures for the reasoned management of paleontological resources. Paleontological protection is not a big problem. There is simply no evidence that it is a big problem. In 1983, there were 40 permits applied for and issued to do paleontological research on public lands in the United States, federally managed public lands. By a count yesterday, as I understand, there have been 56 applications for paleontological research on federally managed lands in the United States so far this year.

Senator **Domenici**. How many?

Dr. **Grogan**. Fifty-six. That comes from Mr. Larry Mirkes of BLM, Washington. That, to me, is not an indication of a significant increase in activity. So the scope of the problem is small, in my estimation, and it does not at this time require additional legislation or regulations pending the results of the National Academy of Science's work. Thank you very much for your time. I would be happy to answer any questions.

[The prepared statement of Dr. Grogan follows:]

Testimony of Sterling Grogan,
Utah International
Before the
U.S. Senate Committee on Energy and Natural Resources
Subcommittee on Public Lands, Reserved Water, and
Resource Conservation

Oversight Hearing, October 14, 1985
Albuquerque, New Mexico

Mr. Chairman and members of the Subcommittee, my name is Sterling Grogan. I work for Utah International Inc. at the Navajo surface coal mine near Farmington, New Mexico, where I am the Manager of Environmental Services, and my comments today are made on behalf of the company. Thank you for this opportunity to testify. I wish to emphasize three points about paleontology, then I would be pleased to answer any questions.

First, paleontology is the study of the fossil record of life on earth, and as such it has scientific and resource management concerns that are quite different from those of archeology. Second, New Mexico is a pioneer state in the wise management of paleontological resources. And third, the problems associated with the management of paleontological resources are very different from those of archeology, they are of substantially lesser magnitude, and they are the subject of a current study by a committee of the National Academy of Sciences. The results of that study will, hopefully, lead to appropriate resolution of the problems.

To expand upon these points, I would like to first emphasize that while there is a large body of often conflicting Federal and State laws and regulations governing the management of cultural resources, there is no such body of laws and regulations controlling paleontological resources. This is exactly the way it should be, at least for now. The National Academy of Sciences Committee previously mentioned may, in its final report, recommend legislation or regulation. However, until that Committee has completed its work, new legislation or regulations dealing with paleontology would not be advisable.

The approach taken by the State of New Mexico to manage significant paleontological resources is instructive. The State Energy and Minerals Department in 1981 brought together representatives of all the concerned interest groups to devise a voluntary program to protect the scientific values of significant fossils that are associated with coal surface mines. That program was signed by Gov. King in 1982, it is subscribed to by all the major coal operators in the State, and by all accounts it works. The BLM used it recently as a model for a cooperative program for public lands they manage in New Mexico.

On the national level, the New Mexico program served as a catalyst for the creation in April of this year of the National Academy of Sciences Committee on Guidelines for Paleontological Collecting. The committee had a very productive meeting in Farmington this past weekend, and is looking into various issues, but the thrust of the Committee's work is to suggest a policy approach that will encourage the wise practice of the science of paleontology without unnecessarily impeding the reasonable development of other natural resources.

With respect to concerns about so-called threats to paleontological resources, there seems to be little or no evidence of significant, widespread theft of fossils in New Mexico. To be sure, people still carry off quantities of petrified wood to decorate their yards, but public education is the most appropriate solution to that problem, not more law and regulation.

The most pressing problem in paleontology is the lack of communication and coordination among the Federal Agencies in the Departments of Interior and Agriculture over the permitting of paleontological research on Federal lands. However, we are encouraged by the progress made to date by the National Academy of Sciences Committee in its discussions with the BLM, and we are optimistic about the chances for resolution of this problem. BLM officials in New Mexico and Washington, D.C. have been most cooperative lately in attempting to work out mutually satisfactory procedures for the reasoned management of paleontological resources. Paleontological protection is not a big problem. In 1983 there were only 40 permits issued nationwide for paleontological research on Federal lands, and there is as yet no indication of an increase in the number of requests for permits. So the scope of the problem is small, and it does not at this time require additional legislation or regulation.

Thank you. I would be pleased to answer any questions.

Senator **Domenici**. I thank you very much. I don't have a lot of questions, but let me just ask Mr. Byers, with reference to the Chaco outliers, just for perspective here, how many acres of land as far as the outliers are concerned, did the Santa Fe Industries own, either surface or subsurface, and on which we needed to effect some kind of trades? Do you remember?

Mr. **Byers**. I believe the entire exchange involves about 4,900 acres, and I believe 3,600 or 3,700 was in the park itself so the remaining 1,200 acres would be within the 7 outliers.

Senator **Domenici**. Has any of it been resolved or is it all going to be resolved together, as far as trading?

Mr. **Byers**. It's going to be resolved together through this exchange that we are doing now.

Senator **Domenici**. And when you spoke of this special piece of legislation being different than FLPMA, one point you made was that Federal Government can make available a pool of property to begin to let the private sector company look at. That's different from FLPMA in that you look at a specific trade, and you say the pooling makes it much more easy to accomplish the intended purpose?

Mr. **Byers**. Senator, we have made two proposals on this exchange. We are in the second go-around now, but initially, the act provided that a pool of lands three times the size of the lands within Chaco ought to be provided, and we worked with BLM. They allowed us to select what we thought that pool ought to be, and that was a good concept, and I believe in Arizona, they are using this as well, but it's under existing legislation. It's under FLPMA, but the State is being allowed to have a block of lands which has been designated by BLM, looked at for them to choose from in Arizona. That was a very good concept, and it ought to be extended, I believe, to allow exchanges to be made a little more easily.

Senator **Domenici**. Tell me, then, this particular transaction involves both the pooling and the interstate transfer?

Mr. **Byers**. No, sir. Our exchange with the Chaco lands now involves only an intrastate exchange. It's an exchange of lands primarily in McKinley County.

Senator **Domenici**. One of the problems with the other suggestion of broadening the scope to be interstate exchanges is clearly a concern of State government and the national representatives of State government as to the quantity of Federal land that already exists in the State. And there's desire on the part of many not to have substantially more, and wide open interstate could end up with that result. It wouldn't have to. but it could. You could be changing an Arizona private sector land for something here or vice versa, in which event you might end up with more Federal land and that's one of the concerns. But I think it's an idea that ought to be looked at.

Explain to me the other one that you talked about on less than equal value.

Mr. **Byers**. The Chaco Act provides that for exchanges involving lands beneath Chaco or beneath the outliers, where the Secretary and the parties involved could agree on a conceptual exchange and where it would have been determined to be in the public interest, then should it prove difficult to assess value, then an exchange of less than equal value could be made.

Another point I wish to make, I do agree that interstate exchanges are going to be a problem, and another problem you are going to have is to do with taxation of properties. Once they could lose a fraction, but if we are talking cultural resources, you are talking a 40-acre site or a 160-acre site, perhaps that fraction is going to be a quite small fraction.

Senator **Domenici**. I have no further questions at this point. Senator Bingaman?

Senator **Bingaman**. Dr. Harlan, I think you mentioned something about your concern or problems with the inconsistency of the implementation of these acts by different agencies, something along that line. Could you state if that is your position, and elaborate on it and maybe give me some specifics, if that's the problem?

Dr. **Harlan**. Yes, Senator, that is a problem and probably the most serious problem that we encounter being a corporate entity, that is seeking to achieve compliance, not attempting to avoid compliance. We find that with proposals, say on BLM, we will go through a series of steps and a similar proposal to the Forest Service would result in a rather different approach to achieve the same result, compliance with the legislation. It makes long-range planning a great deal more difficult, particularly when you are at the stage where you are not even sure which parcel of land is going to be involved in a given proposal. So that you have to plan for a series of scenarios, if we are on the forest this will happen, if we are on the BLM, this will happen and it can be really quite different.

Senator **Bingaman**. This is in administration of the same acts?

Dr. **Harlan**. I understand exactly the same legislation.

Senator **Bingaman**. You think we basically need a common set of regulations to implement the acts which would apply to any agency that is affected, is that what you are suggesting?

Dr. **Harlan**. A common set of regulations. We already have the council's 800 series. I think we need a centralized mechanism standing above all of the agencies to provide at least for some kind of an overview to see if this agency is being reasonable at a given point in time in their approach to compliance consistent with the overall approach by the Government to protect archeological sites.

Senator **Bingaman**. Go ahead.

Senator **Domenici**. I just have one further question. Dan Dutton, with reference to Duke City Lumber and the Jemez case, were you here this morning when the forester addressed this issue?

Mr. **Dutton**. Yes, sir, I was.

Senator **Domenici**. I think I understand and I believe that it's very well understood in the Congress, that the timbering industry is having a very difficult time in this country. I don't think any of us are intentionally trying to make that more difficult. It's probably one of the depressed industries in the land from the cutting of trees all the way down to the fabrication and selling of raw product and finished materials, and we understand that. And clearly in the part of New Mexico that you are concerned with, we have already had one major sawmill close for economic and other reasons, and at least speaking for myself, I don't want to unfairly and arbitrarily add to that burden. But I understood the forester, if I understood him correctly, to say that in a very real sense, he felt they did not comply with their own regulations in preparing the plan for that entire area and that they were doing it and that they hoped it could be resolved.

You are not suggesting, I don't think, that they ought not follow their own regulations in planning as they prepare one of those areas for timbering and other of the multiple uses that are permitted, are you?

Mr. **Dutton**. No, sir, we are not. What we would like to address is that the situation we have today with the forest products' industry in New Mexico is critical from the standpoint in the planning process. We have delays that have been imposed by litigation and therefore, we are in a situation where there is just so much uncertainty. We need to be aware of what's happening at the moment. We have asked to be an intervenor in a lawsuit. We have not been given a date, so we don't know where we stand with that and our situation is such that it's imperative that we can make some planning process.

One other comment I would like to make and I think one of the things that came up in almost every comment this morning, was everyone was looking for additional funding. And we certainly aren't going to have the dollars for additional funding if we take $20 to $30 million out of the State of New Mexico, and that's basically what the timber industry is contributing right now. I say timber, I'm talking northern New Mexico. It's probably even greater than that. Duke City's part is between $12 and $13 million annually. The critical part to us is that our timber supply in New Mexico is now less than 1 year, and to make a planting, any planting at all, we are in a position that something has to be done and it has to be done fast or we are going to be in a position that is going to be a tremendous impact on our business.

One other comment I would like to make, the industry is having some problems, but regarding lumber consumption in the United States, 1984 and 1985 have been record years, and our problems are created by other problems which are being addressed, such as the trading balance and the strength of the dollar. The industry is such that the product is being marketed in the United States and it's being marketed in record volumes. It's just that the pricing is such due to the economic strains that we are having.

Senator **Domenici**. I understand. We had a great recovery in the purchase of products, but the industry didn't get well. That's a serious concern, and we understand why and I'm not saying this is the reason. I would be concerned if we were imposing on Forest Service some impossible kinds of rules, and I understand the company's chagrin and anger when they have a firm contract only to find that somebody didn't do their job or allegedly didn't, and so you can't plan your business. I guess you have a very legitimate complaint, but we still have to get on with protecting the various rights and we will try to do our share to make sure they are not so fragile in terms of resources that they can't get the job done. Did you have anything else, Jeff? We thank you all very much for your patience today.

[Subsequent to the hearing Mr. Dutton submitted the following:]

DUKE CITY
LUMBER COMPANY, INC.

P O BOX 25807 ALBUQUERQUE, NEW MEXICO 87125 TELEPHONE (505) 842-6000

October 30, 1985

Senator Pete V. Domenici
Congress of the United States
United States Senate
434 Dirksen Building
Washington, D. C. 20510

Dear Senator Domenici:

I appreciate your interest in our current problem with maintaining a reliable supply of raw material from the National Forests in New Mexico as a result of the controversy over archaeological site preservation. I believe that the oversight hearing that you and Senator Bingaman held on October 14 provided a necessary opportunity to evaluate the present state of events.

As I indicated in my testimony, the situation of Duke City Lumber Company is perilous. We will need to begin to curtail our operations and order layoffs within the next several months unless the issues raised in the current litigation are somehow resolved.

After my prepared statement, you asked one question which I believe deserves further elaboration. Essentially, you wished to verify that the forest products industry is not advocating that the Forest Service violate existing statutes governing archaelogical site protection as it administers its timber sales program. I want to assure you that this is not our intent. It is the industry's position that: (1) the Forest Service must meet the requirements of the National Historic Preservation Act (NHPA), as amended; and (2) the existing Forest Service regulatory and manual requirements are adequate for this purpose.

However, as I indicated in my testimony, the Plaintiffs in the Save the Jemez v. Block litigation would have the National Historic Preservation Act override all other Forest Service statutory and regulatory requirements, and abandon the concept of multiple use management of our public lands. The State Historic Preservation Officer (SHIPO), in particular, is delaying or enjoining many existing Forest Service timber sales by refusing to accept the Agency's archaeological site surveys. The Forest Service is now beginning the long process of appealing some of the SHIPO's decisions to the National Advisory Council on Historic Preservation.

Our current timber supply problem is a direct result of the SHIPO's action in this area. It appears to us that the State is using the SHIPO review of Forest Service archaeological site surveys as a form of administrative injunction of Forest Service activities. In our view, this is clearly contrary to the intent of the NHPA. Congress cannot have intended to vest a State agency with the authority to tie the hands of the Forest Service in managing federally-owned National Forests.

We share your interest in an expeditious and equitable settlement to the current controversy. I know of your reluctance to become involved with ongoing litigation. However, you should be aware that the State has actively sought to exclude the forest products industry from any effort to resolve this matter amicably. First, the State opposed our intervention in the case. Notwithstanding the State's objections, the Court granted us leave to intervene.

Next, the Plaintiffs and the Forest Service commenced discussions to attempt to settle the case. However, the State has also sought successfully to exclude us from these deliberations. The New Mexico Attorney General's Office informed us and the United States Department of Justice on July 8, 1985 that "[t]he State's position is that settlement proposals and negotiations between the plaintiffs and the United States defendants are confidential between those parties." The SHIPO and the Attorney General's Office have also refused to discuss our current situation with us, apart from the settlement discussions, because "the matter is presently in litigation."

In summary, the State has consistently refused to hear our views, reflect on our concerns, or take advantage of the expertise we have offered in attempting to help frame an acceptable resolution to this controversy. Faced with this attitude, we are very pessimistic that an amicable resolution will be forthcoming. In this context, I appreciate your efforts, and thank you for your interest in our current timber supply problem.

I hope the above thoughts clarify our position on the Forest Service's responsibilities under the law, and on the current litigation. I stand ready to answer any questions you have or participate in any way I am permitted to resolve this dilemma.

Sincerely,

Dan M. Dutton
President

DMD/sb

Senator **Domenici**. Our next panel is Laura Beaty, National Parks and Conservation Association, Washington; Ted Davis, president of Save the Jemez, Albuquerque; Mark Michaels, archeology conservancy, Santa Fe; Robert Collins from Albuquerque and Doctor Carol Condie, Quivira Research Center, Albuquerque. We have one remaining panel and when we are finished with these we will take the remaining three. You may start, Laura.

STATEMENT OF LAURA L. BEATY, ADMINISTRATIVE ASSISTANT, HISTORIC HERITAGE, NATIONAL PARKS AND CONSERVATION ASSOCIATION

Ms. **Beaty**. Thank you. I will summarize my statement. The statement that we have from the National Parks and Conservation Association makes six recommendations that we believe will improve the ability of the Park Service to manage and protect archeological sites and park collections. The first three recommendations that we have are basic requirements we believe are essential for resource protection. The first one has to do with basic resource inventories. The fact is you can't protect a site unless you know that it exists. Massive sums of money are not required in this case, but consistent funding is important for the Park Service to complete baseline inventory studies which now are not being done. If specific sums can be counted on year after year, the Park Service can begin to move toward completing base line data for all resources, including archeological sites and collections. Loss of sites are not always the fault of vandals. The Park Service has inadvertently destroyed sites due to the lack of incomplete surveys on their own properties. Unless these are completed, the Park Service cannot properly manage and preserve resources and artifacts on it.

Second, we are talking about the training of park personnel. The Park Service should establish a cultural resources management training program that parallels the successful Natural Resources Training Program. This program could provide both short-term and long-term benefits to the Park Service by training personnel to become more sensitive to the special needs. A model does exist now with the existing natural program, and a specific proposal that was previously prepared by the Southwest office for a cultural resources management program which has not been implemented, should be implemented and we have that proposal that we would like to submit for the record.

The third recommendation has to do with instituting a tracking system, a computer based tracking system within the National Park Service. We would urge the Park Service and the Department of the Interior to provide necessary support and resources to assure that this system is fully activated. Current attempts by the ranger office in Washington to complete the computer data base is being done right now on a shoestring operation. The ability to track and to share information on suspicious vehicles, aircraft equipment, and individuals, with other nearby land managers, both State and Federal, can put the law enforcement personnel in the mode of anticipating acts of vandal rather than reacting to incidents.

Our fourth recommendation has to do with public education, and this has been talked about a number of times this morning, but we would urge the Park Service to move more aggressively on public education, starting at the park level with expanded interpretation programs and then at the broader level. The Park Service should work with other land managing agencies, both State and Federal, but also universities, professional societies, conservation organizations, clubs, all of those people will be important in getting out the word to the public on the importance of protecting these sites.

The fifth recommendation has to do with the operation of other Federal agencies. Tom Merlin mentioned this morning of damage done on archeological sites by Federal actions and this, in fact, is the case. However, if those agencies had carefully followed the regulations, those sites might still be around today. Regarding the resources in the National Park System, we believe that they could be better protected if the agencies, other agencies outside the Park Service were required to consider the impact of their projects on the Park Service resources.

Our final recommendation has to do with state-of-the-parks reports. We would urge the Park Service to voluntarily submit state-of-the-park reports on a biannual basis to the Congress. However, the requirement for biannual reports could be done through legislation to ensure their continued transmission to the Congress regardless of any change in administration. The only state-of-the-art report was requested by the Congress. One of the results of that request was a 1982 Threats to Cultural Resources Report which includes pertinent information on archeology and curation. We would like to submit a copy of that for the record, and believe that periodic reports that were to be done by the Park Service would benefit not only the Park Service, but the State acquainted with what the resources are, but it would help the Congress in understanding where the Park Service is in managing those resources.

[The prepared statement with attachments submitted by Ms. Beaty follow:]

STATEMENT OF LAURA L. BEATY
NATIONAL PARKS AND CONSERVATION ASSOCIATION

PRESENTED TO THE
PUBLIC LANDS, RESERVED WATER AND RESOURCE CONSERVATION SUBCOMMITTEE
U.S. SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

OVERSIGHT HEARING ON THE EFFECTIVENESS OF FEDERAL LAND MANAGERS
IN PROTECTING AND PRESERVING
ARCHAEOLOGICAL AND PALEONTOLOGICAL SITES AND OBJECTS

My name is Laura L. Beaty, and I am the Administrative Assistant for Historic Heritage at The National Parks and Conservation Association (NPCA). NPCA is a non-profit national conservation organization with approximately 50,000 members commited to the conservation and preservation of the resources within the National Park System.

We want to take this opportunity to commend Senators Bingaman and Domenici for their efforts in organizing this important oversight hearing. Because of the abundance of federally managed archeological sites and associated collections in New Mexico, this is an excellent location for this hearing.

I want to focus today on a number of recommendations that we believe will improve the ability of the National Park Service (NPS) to carry out its management responsibilities for archeological sites and park collections. Many of our recommendations are based on information that is contained in the "Threats to Cultural Resources Report - 1982", and the Fiscal Year 1986 Budget Justification for the National Park Service. I have highlighted excerpts from both of these documents for your information and attached them to my testimony.

The Cultural Resources Report was prepared by the NPS at the request of the Congress, and the information it contains is critical as it represents the only report ever made by the NPS to apprise the Congress of the state of the cultural resources. Without follow-up reports, however, it is impossible for the Congress to compare any progress made on the problems identified in the 1982 report.

The Budget Justification for the National Park Service prepared and submitted to the Congress each year often contains conflicting information regarding resource needs and recommended funding levels. The fiscal year 1986 document states that the Service does not know the number of archeological sites that it manages. Yet, it reduces the funding source--Cultural Resources Preservation Program--that would provide for archeological surveys to be conducted.

SUMMARY OF RECOMMENDATIONS

We believe that the NPS should establish programs that provide for:

(1) preparation of basic resource inventories;
(2) training for park staff to enable them to recognize and protect all cultural resources;
(3) incident tracking systems for law enforcement personnel charged with patrolling archeological sites on federal lands;
(4) public education programs on looting and vandalism;
(5) improved federal responsibility for the protection of archeological resources; and
(6) Periodic state of the park reports to the Congress.

Most of these recommendations will need the strong support and assistance of the Congress if they are going to be implemented.

1. Basic Resource Inventories:

The Cultural Resources Preservation Program is the NPS funding source for baseline cultural resource inventories. This program operates through annual appropriations. As outlined in my attachment, the NPS has not completed archeological surveys for each park in the System, nor have all of the parks completed the job of cataloging the estimated 10 million objects located throughout the System. Unless these tasks are completed, the NPS will never be accountable for the objects under its protection, nor will it be able to protect archeological sites within its jurisdiction.

Because of the lack of information relating to the location of sites within the parks, NPS personnel have inadvertently destroyed archeological resources through soil-disturbing activities. Ideally, each park should have at least a minimal inventory of archeological sites to ensure that other park operations do not destroy that resource. This information can benefit park managers in these ways:

(a) allow for the removal of visitor activities to less sensitive areas within the park;
(b) alert rangers and law enforcement personnel for patrolling purposes;
(c) improve planning for any mitigation or salvage work for areas cited for future park development; and
(d) facilitate planning for any future research/interpretive activities.

Looters hold a distinct advantage when the NPS is not aware of the archeological sites within its boundaries. This vulnerability will continue until basic surveys are completed. Again, these surveys are essential for protecting those sites against looters and careless NPS actions.

Collections management involves a different type of problem. Until 1980, the NPS was without a Chief Curator and little effort was made to properly manage one of the Service's major resources, its large collection of objects. With an agency curator now in control, a policy and a process are in place that will ensure that all objects are cataloged by the turn of the century. But this can only happen if consistent, annual funding is available and if additional, trained curators can be hired. The cataloging process has been streamlined, a computer is now being used to store the information, and object management documents, such as the scope of collections and the collection management plans, are being prepared by the parks. This work will continue to be completed if sufficient funds are available annually.

A major deficiency identified in the "Threats" report addresses the lack of adequate storage space for object collections in the parks. "Overcrowded and substandard storage was...identified for its deleterious effects on objects." Proper storage facilities are needed at many park areas, due to extremes in temperatures and humidity to which the objects are subjected.

These activities have been funded for the past couple of years by the additional money recovered through the Park Restoration and Improvement Program (PRIP). This program was created by former Secretary Watt who used most of the funds of the five-year program to rehabilitate facilities within the parks. Fortunately, some of the money was added to the Cultural Resources Preservation Program where numerous collection management projects and archeological surveys and stabilization projects were completed.

Recommendation:

The Congress must provide adequate annual funding for the Cultural Resources Preservation Program if these basic activities are going to be completed. And, unless they are completed, the NPS can not properly manage or preserve the resources entrusted to it. The funding level prior to the PRIP money was about $2 million. Funding during PRIP was about $7 million. If the NPS could count on between $7 and $10 million annually for the next 10 years, it could begin to meet its obligations for resource identification and accountability. Fortunately, the Congress can, if it wishes, ensure that this money is made available.

2. Cultural Resources Management Training Program:

The purpose for establishing a training program is to develop a cadre of park employees who are fully trained to assist park managers and regional specialists in recognizing and protecting the wide diversity of cultural resources within the System. The 1982 "Threats" report indicated that many resource threats go unrecognized because staff is not capable of recognizing them. Because of the additional paper work required by the various preservation laws on park projects, regional specialists find that most of their time is spent in the regional offices rather than assisting the parks with cultural resources problems.

There is, however, a successful model under which this training program can be fashioned. A similar program for natural resources, Natural Resources Management Training Program, was established several years ago. The program has been successful and is continuing to train natural resource management specialists.

It would be extremely useful to managers to have a cultural resources management (CRM) specialist in the park since most management decisions must be based on the location and the condition of the cultural resources. Over the years the NPS has lost many cultural resources due to management decisions based on insufficient knowledge about those resources.

Once these CRM specialists are placed in the parks, they could then develop a curriculum to instruct any and all other park personnel in problem identification and reporting, and techniques for assisting them and the regional specialists in problem-solving.

The placement of fully trained personnel is expected to result in substantial cost savings in terms of resource preservation and protection, as well as improving the overall decision-making capability of the park superintendent. In addition, CRM specialists could assist in developing public education material involving issues related to the conservation of cultural resources in the parks, and volunteer activites related to cultural resources protection.

Recommendation:

The NPS should establish a cultural resources management training program that parallels the successful natural resources management training program. This program could provide both short term and long term benefits to the NPS by training personnel to become sensitive to the special needs of the diversity of cultural resources found within the National Park System.

3. Incident Tracking System:

A comprehensive system for reporting all incidents of vandalism and looting of archeological sites as well as other violations of natural and cultural resources should be developed within the NPS. It is impossible to get statistics about the number of incidents involving archeological sites Systemwide since there is no consistency in the recording process from park to park. Neither is there a centralized repository where incident reports are maintained. This situation works against the NPS, for unless it can quantify the extent to which looting of archeological sites is a pervasive and growing problem, effective solutions will never be proposed.

The Washington office of the NPS, however, is working to remedy this deficiency. A law enforcement incident data system is being developed and is being placed in selected NPS regions at the end of the year. This system has been developed on a shoe-string budget with funds pulled from a variety of NPS programs and offices that stand to benefit from the system. The computer base was donated on a year to year basis by a computer company whose support could disappear at any time.

Used at its optimum capacity, this data system could link all NPS law enforcement personnel with each other and with personnel from other federal land managing agencies. In addition, this system could ultimately tie relevant State offices into the system. Tracking information on suspicious vehicles, aircraft, equipment, and individuals could be shared with other nearby patrols in an effort to anticipate a potential acts of vandalism. This information would be extremely helpful in detering crimes, especially within high risk areas or regions. Fully operational, this system would enhance opportunities for catching looters in the act, before the scientific value of a site is completely lost.

Recommendation:

NPCA urges the NPS and the Department of the Interior to provide the necessary support and resources to ensure that this system is fully activated. We urge the Congress to support this by providing a one time appropriation of $1 million to purchase the main terminal for the Washington office, to complete the main base functions of the computer, and to provide compatible computers in critical park units where none currently exist. An annual funding level of approximately $250,000 could save this country millions of dollars in lost objects and scientific information that belong to all of us.

4. Public Education:

Everyone agrees that educating the public about why looting occurs, who benefits from this activity, and who loses from this activity, is the first step to helping to reduce the magnitude of the problem. The NPS has been reluctant to speak candidly with the public about the issue of looting and vandalism, except on a park specific basis. For example, the superintendent at Chaco Cultural NHP prepared and displayed a catchy poster illustrating and explaining why the casual removal of artifacts by park visitors takes away irreplaceable pieces of a puzzle that could someday help unravel the mystery of the Chacoan Civilization. The poster has had direct results. Some of the park visitors are writing letters to the park referring to the poster and returning artifacts. A similar display was done effectively at the visitor center of Petrified Forest National Park.

In the 12-point plan recently issued by the Director of the NPS, he emphasizes that public education must be addressed more comprehensively. We applaud his commitment in this area, and wish to underscore the need for this activity to be addressed as quickly as possible on the issue of resource protection. Park visitors can be a park's best supporters if the effort is made to inform them of ways that they can help protect the park's resources. Any efforts by the NPS and other land managing agencies to reach beyond their boundaries to audiences of school children, scouts, neighbors and others to present interesting programs and graphics about the problems of pot hunting will be rewarded. This is also an ideal opportunity to talk about the mission of the agency and some interesting facts about particular archeological sites where current research has revealed new information.

Recommendation:

NPCA urges the National Park Service to move aggressively on public education, starting at the park level with expanded interpretive programs that include information about illegal activites that cost the public in both lost resources and diverted energy of the NPS staff. At a broader level, the NPS should work with other land managing agencies, both State and federal, universities, professional socities, conservation organizations, clubs, and neighbors to prepare material and present programs to make the public aware of the problem and to seek their assistance in curtailing hobby collecting on public lands.

5. Federal Agency Responsibility:

The loss of archeological resources is not just the work of vandals, but federal agencies that fail to comply with preservation laws established to protect sites or salvage information contained therein. One way to protect archeological resources is to ensure that all federal agencies are following the regulations prepared by the Advisory Council on Historic Preservation. These regulations were prepared pursuant to the Historic Preservation Act and designed to minimize the impact of any federal action on a site listed or eligible for listing in the National Register of Historic Places. Non-compliance by federal agencies has contributed to the loss of many sites, and thus much information. The authority of the Advisory Council is being questions by those in the Administration who would like to reduce the responsibility of federal agencies to protect or salvage resources that stand in the way of agency activities.

Another way to protect archeological resources from the actions of federal agencies is to strengthen the hand of the Secretary of the Interior by requiring greater federal cooperation and compliance with the Archeological and Historic Preservatin Act of 1974. This act makes the Secretary responsible for coordinating and administering a nationwide program for the recovery, protection, and preservation of scientific, prehistoric, historic, and archeological data which would otherwise be damaged or destroyed through federal actions. There has been a less than adequate response by the federal agencies regarding this requirement. There may be only a legislative solution to this problem--amend the act to clarify the rulemaking authority of the Secretary.

The agencies within the Department of the Interior operate as if they were located within different Departments. The lack of cooperation between the National Park Service and the Bureau of Land Management on numerous projects is having a detrimental affect on the resources both agencies should be protecting. For example, 41 months have lapsed since Santa Fe Minerals agreed to exchange their subsurface holdings within the newly expanded boundaries of Chaco Culture NHP for BLM holdings outside of the park. The BLM has failed to carry out this exchange despite the support of both industry and conservation organizations. The unwillingness of BLM to complete this exchange frustrates further industry involvement in other possible exchanges and compromises the archeological resource.

A further example of BLM's unwillingness to protect significant archeological resources is endangering a site that is proposed for addition to the Petrified Forest National Park in Arizona. Forty acres of privately owned land were purchased by the Archaeological Conservancy for donation to the park. The donation does not include the subsurface rights which are held by Santa Fe Railroad. Legislation to add this tract to the park is stalled in the Congress because the BLM will not complete an exchange of nearby subsurface rights with Santa Fe.

The Congress has repeatedly expressed its intentions, in both generic and specific statutes and by other means, that the cultural and natural resources of the National Park System be accorded the highest degree of protection, and yet degradation of those resources occurs frequently at the hands of other federal agencies. Unless or until specific legislation is enacted to mandate consistency between federal spending and a federal responsibility to protect nationally designated sites, loss of park resources will continue in the future.

Recommendation:

If the Secretary is not able to solicit a cooperative response from the BLM, the Congress should conduct inquiries into the bureaucratic operations of its Washington office. The attitude currently held by that office benefits neither its field personnel nor the resources.

The Congress must encourage agencies to consider the impact of their projects on designated units of the National Park System. Alternatively, NPCA supports the legislative approach as a means of eliminating any uncertainty regarding the intent of the Congress on the issue of park protection.

6. State of the Park Reports:

The 1980 State of the Parks Report prepared by the NPS at the request of the Congress constituted the first comprehensive report on the state of the natural resources ever prepared. The comparable report for the cultural resources was also the first report on those resources presented to the Congress. These reports should be prepared periodically to encourage the NPS to continue to monitor resource threats and to provide the Congress with a means of measuring the NPS's actions in reducing these threats.

In addition to identifying specific and generic threats, these reports also evaluate how well the NPS is completing baseline resource inventories. The importance of these inventories can not be overemphasized since they constitute the extent of the NPS's knowledge about the resources it is mandated to protect.

Recommendation:

NPCA urges the NPS to voluntarily submit updated "state of the park" reports biannually to Congress. We encourage the Committee to request that these reports be done for the Congress. The requirement for biannual reports could also be legislated to ensure their continued transmission to the Congress regardless of changes in Administration

NPCA appreciates the opportunity to present this testimony. I will be happy to answer any questions that the Members may have.

ATTACHMENT

THREATS TO CULTURAL RESOURCES - 1982

Concerned about the state of the resources within the National Park Service (NPS), in 1978 the Congress requested the NPS to prepare a state of the parks report in order that the Congress would have some idea about how the resources are being managed. A separate report on the cultural resources entitled "Threats to Cultural Resources" was presented to the Congress in 1982. The information in the report was based on responses from virtually every park in the System. It is important to note here that nearly all of the 337 parks in the System have responsibility for cultural resources of some form, not just the historical or archeological parks.

In the introduction of the report, it was acknowledged that unless a park's staff had the ability to identify problems, that threats would go unrecognized and unreported. Thus, the report stated: "Due to this situation, we feel that the survey results probably underestimate the magnitude of the problems." Regarding archeological resources, the report says:

> Digging for and collecting artifacts is increasing, particularly in the historic battlefields and archeological areas of the parks. Smaller park staffs and lower fuel consumption goals resulting in less frequent patrolling of the parks are blamed for much of this rise in vandalism. And while illegal collecting is increasing, the parks have no reporting system to document or quantify the threat. Many parks lack adequate evaluative inventories of their archeological resources. Because of this, park managers are unable to determine which archeological resources are significant and warrant preservation and protection.

The following paragraphs summarize the problems related to collections management contained in the report:

> One of the most important aspects of collections management is accountability for the objects. Park Service standards require that each object receive a unique identifying number and that the object be described on a catalog card. However, the Survey indicates that only 20 percent of the parks have documentation and catalog records that are up-to-date. The 700,000 catalog cards on file in the central National Catalog repository indicate that less than 10 percent of the estimated 10 million objects in park collections are actually cataloged.
>
> Two major factors stand out as the most critical threats to museum objects at the present time. These are: (1) the lack of accountability for the objects due to the absence of catalog records; and (2) the lack of environmental control, especially in the areas of temperature and relative humidity.

Overcrowded and substandard storage was also indentified for its deleterious effects on objects. In numerous parks, object storage is relegated to attics, basements, and crawl spaces. Not only do these spaces lack proper temperature, relative humidity, dust and security controls, but the stacking of objects and awkward handling to move objects in and out of storage guarantees damage. Such storage areas exist at many parks.

Numerous conclusions and recommendations were included in the report. Only those relevent to this hearing are included below:

1. The key to good preservation is a stable and sufficient staff of professionals and para-professionals, and a steady and reliable infusion of funds.
2. Though some of the cataloging and preservation work can be done through contract, it is necessary to increase the number of trained professional staff for hands-on preservation work. The Service needs to add approximately 70 curators and conservators to its staff over the next five to seven years.
3. Preparation of a basic inventory and catalog of museum objects is essential to establish accountability for the Service's museum collections, and accountability should be the highest priority for this program. Emphasis should be placed on providing the resources to inventory collections and to complete the development and implementation of a Servicewide National Catalog.
4. The need for baseline inventory data is essential for all catogories of cultural resources.
5. A more comprehensive training program should be developed. Courses should be developed to instruct park managers and their staffs in the basic requirements for the preservation and protection of cultural resources.
6. To curb vandalism, an aggressive educational program to sensitize the public to the waste and destruction that is occurring may be effective.
7. A systematic monitoring and reporting procedure needs to be established for determining extend and occurrence of vandalism. Most cases don't reach the magnitude that triggers an incident report; but in order to document and deter the problem, all cases need to be recorded.

BUDGET JUSTIFICATION DOCUMENT

Each January the Administration submits to the Congress its recommended budget for the next fiscal year. Accompanying the budget is a justification document for each federal agency. In the fustification for the NPS's FY'86 budget two items under the subject of Cultural Resources Management (CRM) need to be emphasized here.

First, the description under CRM states that the "Service manages over 70,000 culturally significant properties, an estimatd 10 million objects, and an, as yet, unknown number of archeological sites (emphasis added). Yet in many cases, little is known about the resources or how to ensure their protection. The Service has an active long-term program to identify and assess the condition of its extensive holdings."

NPCA supports the NPS in its efforts to locate and inventory archeological sites within its jurisdiction. Unless it moves more quickly in this direction, however, many of those sites will be discovered and looted before the NPS even recognizes that the sites existed.

Second, an important funding program under CRM is called the Servicewide Cultural Resources Preservation Program which provides annual funding for "stabilization and preservation work on cultural landscapes, archeological and historic sites, historic and prehistoric structures, and cultural and natural history collection materials. Funds are also used for archeological surveys, history studies, the preparation of management studies, and other research and data collection activities." These are just the sorts of basic projects that provide the park units with the essential baseline inventory data emphasized in the 1982 report mentioned earlier. Yet, the Administration recommends that the program be reduced by $2.6 million in FY'86 based on the following explanation:

> A reduction of $2.6 million is proposed for the Servicewide Cultural Resources Preservation Program. Under the Park Restoration and Improvement Program, funding for preservation and stabilization projects increased from $2.1 million to $7.1 million annually. The proposed decrease will slow the pace of this effort, but still leaves adequate funding in the budget for high priorty projects.

About 250 projects worth $13.9 million were identified by parks and regions for funding in FY'86, yet only $4.3 million was recommended by the Administration. Fortunately the Senate Appropriations Committee has approved a budget measure that would fund this program at last year's level. But even at this higher figure (almost $7 million) only 76 of the 250 projects can be funded in FY'86. However, for this higher figure to prevail, the House must accept the Senate increase in conference.

Projects not funded in this round must compete with the next years crop of projects. The longer adequate funding is denied, the greater the loss of cultural resources.

CULTURAL RESOURCE MANAGEMENT TRAINING PROGRAM
for the
SOUTHWEST REGION

SOUTHWEST CULTURAL RESOURCES CENTER
1985

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INTRODUCTION

As the nation's primary agency with a single conservation mandate, the National Park Service's mission to manage cultural and natural resources of national importance is clearly stated, as is the responsibility this mandate imposes on park managers. Though neglected in the past, there is now a growing awareness in the Service for the need of resource management specialists to assist superintendents in meeting their responsibilities toward an issue of primary concern--that of resource conservation. Almost 60% of the Service's units are primarily culturally oriented. The Southwest Region, with a 10% greater frequency of such areas, should be a leader in developing a comprehensive cultural resource management training program.

A Park Service program to train such specialists in natural resource management has existed for several years. Unlike natural resources, cultural resources are non-renewable and thus take an expertise of a different nature to properly address management's responsiblity. At the present time, most of this expertise rests in the regional offices and in archeological or cultural resource centers. The staffs of these offices are currently over-extended, and, although well-qualified as cultural resource specialists, few are experts in park management.

For these reasons, there is a pressing need for qualified personnel at the park level who understand the complexities of protecting and preserving cultural resources in the parks, the qualities of the resources themselves and the problems and responsibilities of park management. Fulfilling this need requires that we operationalize our conservation policy by properly training and utilizing personnel in key positions at the park level. Although it is a task of considerable magnitude, such training is entirely feasible given the level of knowledge and technology currently available in the Service. What is missing is a formal mechanism to provide such training, and the following program is proposed to meet this need. It is specifically designed to transform individuals with perhaps education and/or experience in a specific aspect of cultural resources, expose them to a high level of training from professionals in a variety of cultural resource management disciplines, and place him or her in a position that assumes responsibility for the entire range of management and assistance functions involved in the field of historic preservation. Its effectiveness will be assessed by a thorough evaluation of every aspect of the program.

PURPOSE

The purpose of the program is twofold. First, it will begin to address the immediate need for fully trained personnel who can aid park managers and regional specialists in achieving the increasingly complex management of dispersed and varied cultural resources in the National Park System. Second, the program will ultimately provide a cadre of highly qualified Park Service personnel as a source of future park managers well-trained in, and sensitive to, the preservation and protection of cultural resources. It should be emphasized that the intended purpose of the program is to produce cultural resource management specialists and not to produce archeologists, historians, architects, or curators.

Perhaps the most important aspect of this program is that it recognizes a critical need in the Park Service and addresses that need in a positive and active manner. This is in contrast to the "reactive" nature with which many management issues are frequently met--that is, with minimal planning and preparation and, as a result, with wasted effort and expense. This program will result in a nucleus of cultural resource management professionals who will improve the Service's overall decision-making processes, thus resulting in more cost-effective approaches to resource protection and preservation.

BENEFITS

The placement of fully trained cultural resource management specialists is expected to ultimately result in substantial cost savings both in terms of resource preservation and protection, as well as improving the overall decision-making capability of the park superintendent. The Service has not yet focused its energies on providing park superintendents with cultural resource management (CRM) staff experts.

Although some steps toward improved efficiencies have been implemented, these have primarily been focused on streamlining regional office processes rather than training field personnel. For example, the Service uses the "XXX" form as a means of decreasing turn-around time between the regional office and the park unit for Section 106 compliance. This process has proven to be effective, however when problems arise requiring more expertise it becomes necessary for the regional office to provide onsite assistance, often necessitating schedule and personnel realignments. If a CRM specialist were present at the park, there would be fewer cases of unexpected travel and short-term reassignments of Regional Office personnel.

Another benefit from having CRM expertise at the park level rests in the earlier identification and analyses of cultural resource issues associated with park developments. This would reduce costs related to both project realignments and unexpected impact mitigation, while facilitating compliance procedures.

Cultural resource management specialists could also assist in improving public awareness of the overall issues involving conservation of cultural resources in the parks. This includes serving as the focal point for organizing volunteer related activities for protection of cultural resources as well as assisting other park personnel in developing a public outreach program that conveys the Service's high standards in CRM.

A cadre of CRM specialists would constitute the basis for developing a simplified process to share information among management areas in resolving new problems. CRM specialists would act as catalysts for disseminating such information and as field advisers to nearby areas that may not have such a specialist or may need occasional assistance. In any instance, the credibility of the decision process at the resource level would be enhanced.

In summary, CRM specialists can provide a critical link to long-term cost savings in the proper management of the Service's cultural resources. Through training, the Service can develop a cadre of managers better able to devise alternative solutions to resource management problems which more fully reflect a broader range of professional interests. Also, accountability of active management is put at the resource level thereby increasing the overall effectiveness of the decision-making process while improving the care given the National Park Service's non-renewable cultural resources. Over time, the development of such specialists will provide a pool of management-oriented staff highly trained in CRM who would be eligible to pursue management avenues in their career with the National Park Service.

PROGRAM ELEMENTS

The design of the program is twofold. First, the main thrust of the program is to provide intensive long-term training (2-year internships) for those interested in becoming cultural resource management specialists. Second, short-term training courses will be developed to address specific requests from superintendents and regional office personnel in meeting the region's CRM training needs.

For the internship program, potential trainees are those who have a background in a cultural resource management discipline and who possess both the desire and commitment to expand their scope of knowledge in order to better manage the resources. Each intern will be intensively trained for one year in all general aspects of cultural resource management. The second year's training will focus on specific cultural resource management skills and knowledge as dictated by the resources of the recipient park. Generally, the first year's training will not incur frequent travel to parks while the second year will involve many training assignments in the recipient park, as well as in other areas. The official duty station for both years will be Santa Fe, which is consistent with the location of the intern's immediate supervisor and direct administration of the program. Interns will be required to demonstrate their acquired level of competence under the scrutiny of, and close association with, staff members of the Southwest Cultural Resources Center.

TYPES OF TRAINING

Cultural resource specialists will be expected to perform a wide variety of tasks related to resource management. The intern program will encompass as much of this variety as possible during the two-year training period. However, it is important that the program not try to accomplish too many things at the expense of doing none well. At no point should the quality of the training material be sacrificed for quantity of items covered. Though it would be ideal to devise a training program in which the intern emerges extremely competent in all aspects of Park Service operations, such a goal is not feasible in the time allotted, nor would it be entirely consistent with the stated purposes of this program.

For these reasons, the list of potential training subjects relevant to cultural resource management in the National Park Service has been divided into two basic categories: 1) principal or "core" material, i.e., topics which are directly related to the park's cultural resources, and 2) "ancillary" material, i.e., that which is indirectly related to the resources. Although not an exhaustive list, these topics were derived from extensive discussion with experts in the field of cultural resource preservation. A list of the subjects follows the description of each basic category.

I. Prinicpal (core) subjects:

Training material included in this category must occupy the highest priority in the program, both in terms of time spent and quality of instruction. It comprises the core of the program, regardless of the specialty of the trainee or the nature of the recipient park. It will be emphasized in the intern's Individual Development Plan (IDP) and the trainee must demonstrate the highest proficiency in this material before placement in the park.

a. CRM Policy, Legislation, and General Background
    Legislative basis (1906 Act, NHPA, ARPA, AIRFA, NEPA, Tax Act, etc.)
    NPS-28, NPS-23 Technical Manual, NPS-38
    Secretary's Standards and Guidelines
    National Historic Landmark Program
    Relevant NPS courses, workshops, training sessions

b. Planning; Fiscal
    NPS-2
    Resource management plans (especially CRMPs), GMP, LPP, SFM, OPP
    Scopes of work, RFPs
    Programming and budgeting
    Contracting
    Maintenance management systems, cyclic maintenance, CRP programs

c. Research; Studies, Projects (identification, evaluation, treatment)
    Archeological studies, research methods

    Historical studies, research methods
    Submerged cultural resources
    Remote sensing, sampling, predictive modelling
    Historic structures reports
    National Register nominations; Cultural Sites Inventory
    Cultural Landscape Plans, historic vegetation studies, Historic Landscape Management Plans

d. Preservation; Compliance; Protection
    Structural preservation, conservation, stabilization, rehabilitation
    Compliance (XXX forms, Section 106, ARPA, NEPA)
    Cultural resource law enforcement
    Damage assessment to cultural resources
    List of Classified Structures
    Historic Property Leasing Program

e. Curation; Interpretation
    Curation policy, collections maintenance, conservation, exhibits
    Interpreting results of research to management
    Interpreting results of research to the public
    Scope of Collections Statements, Collection Management Plans, historic furnishing studies

2. Ancillary subjects:

Training material included in this category is important to the trainee's program, but does not receive the same emphasis or priority as the principal subjects. Ancillary material can be adjusted to reflect the needs and nature of the recipient park area, as well as the specific experience and background qualifications of the individual trainees. Less time is allotted for training in these subjects in the intern's IDP, and there can be less emphasis on the one-on-one aspect of training considered essential for the principal topics. For example, if the recipient park has no (or few) concessions, training in the relationship of CRM to concession impacts need not be emphasized. Or if the trainee has adequate experience in the field of computers as they relate to resource management, training in that subject need not be included in his or her IDP. In terms of priorities in the trainees' schedule, material in this category must be considered subordinate to the core subjects, and the detail with which they are treated must be a function of the time remaining after it is clear that the core topics have been fully covered.

a. Administration
    Personnel actions, recruitment, position descriptions
    Supervision, performance appraisal
    Public relations

b. Ancillary Park Operations
    Natural resource management
    Maintenance
    Visitor safety
    Concessions

c. Ancillary Skills
    Related NPS coursework, training sessions
    Computer skills
    Photography, photogrammetry
    Related academic coursework

Training experiences during an internship may be acquired from formal classroom instruction (from both Federal and non-Federal sources); seminars; participation in professional meetings, task forces, workshops and planning teams; fieldwork; temporary duty assignments with the Southwest Cultural Resources Center divisions, park areas, related Southwest Regional Office divisions, Washington Office and special program facilities (e.g., Harpers Ferry Center, Western Archeological and Conservation Center, etc.); cooperating museums and laboratories and correspondence courses. Seeking out and arranging training experiences is the responsibility of the intern's supervisor in conjunction with the intern's Individual Committee and in consultation with the intern.

Training sources and the implied diversity of training aids are not limited to the many training experiences listed here. The program will constantly be open to alternatives. Additional opportunities will be considered from the standpoint of the Park Service's needs, the trainee's ability to fulfill those needs and the feasibility of individual training sources.

SHORT-TERM TRAINING

The Southwest Cultural Resources Center (SWCRC) has conducted short-term training courses on an occasional basis in previous years. The consolidation of the SWCRC training efforts for the intern program, as previously described, will facilitate the planning required for these shorter sessions and, therefore, greatly enhance the effectiveness of the training given. The Program Committee, as defined in this proposal, will develop and manage the short-term training program.

The complexity and length of the intensive short-term training courses will be quite diverse since their development will be based on the individual needs of a variety of park areas and trainee skills. However, two types of short-term training are anticipated. First, the SWCRC staff will conduct training sessions at least once yearly that are felt necessary by the SWCRC staff to keep CRM field personnel current (i.e., training in areas of recurring duties expected to be fulfilled by all CRM field personnel). Their development and implementation will be closely coordinated with the Branch of Training through its regional program.

Second, instruction in topics not covered by these regular sessions will be offered on an occaional basis, as can be accommodated by the SWCRC's staff. In contrast to the first type of short term training described, these topics are specific to an individual park or project. Reliance will be placed on park superintendents for suggested topics. Although such courses will be considered as official training opportunities, their development and implementation will be largely internal to the SWCRC. If possible, these sessions will be worked into the Branch of Training's regional calendar.

Both types of short-term sessions will be organized and presented as constructive solutions to current crises or deficiencies identified in the parks. Superintendents will be requested to provide suggestions for training topics and insure that their appropriate staff attend.

Neither the short-term nor the long-range CRM training duplicate the "hands-on" preservation training conducted by the Division of Conservation, SWCRC. The hands-on training is separate and distinct from the training program described in this proposal.

Short-term training capabilities will begin to be developed in FY 85 and offered throughout the last four years of the schedule. A portion of the travel and per diem costs for trainees and instructors in Appendix A is budgeted for short-term sessions. The salaries and benefits for both trainees and instructors participating in these short-term sessions will not be funded by this training program.

PROGRAM DIRECTION

Program Committee

General direction for this training program will be provided by the Program Committee. This committee consists of the following Southwest Region personnel: Deputy Director (chairperson); Associate Regional Director, Planning and Cultural Resources; Chief, Southwest Cultural Resources Center; all Southwest Cultural Resources Center Division Chiefs; Regional Curator, and Survey Historian. Their direction will be supplemented by discussions with experts in training, personnel, natural resources, planning, and others as necessary.

The specific responsibilities of the program committee are to establish criteria and rank potential recipient parks, serve on the personnel rating panels for intern positions, appoint the independent counselors that will serve on the intern's Individual Committee, approve each intern's IDP, monitor the progress of the trainees (through the intern's Individual Committee), contribute to the evaluation of the program and recommend revisions, and plan short-term training sessions. It is estimated that the program committee will meet at least twice annually. Additionally, the Deputy Director will approve the position descriptions and be responsible for selecting the interns.

Intern's Individual Committee

Each intern will be guided by his or her specific Individual Committee, consisting of the Survey Historian, Division of History (chairperson), the superintendent of the recipient park, and an independent counselor. The independence of the counselor from both training and management functions is considered a key element of the program, and the counselor can serve as a mediator when necessary. The Survey Historian, Division of History (PCH) and the superintendent on this committee will recommend to the Program Committee prospective independent counselors.

This committee will counsel the trainee throughout the internship, develop and modify the IDP, and draft the position description. It will also evaluate the progress of the trainee, although ultimate responsibility for both supervision and performance evaluation rests with the Survey Historian, PCH.

TRAINEE RECRUITMENT, SELECTION, SUPERVISION AND PERFORMANCE EVALUATION

All parks in the Southwest Region may contend for cultural resource management specialist positions. Potential recipient parks will be ranked by a consensus of the Program Committee and sent to the Regional Director for selection. Rankings will be based on the complexity of a park's resources, its managerial concerns and problems, and the availability of expertise at the park.

A position description will be written for each intern position immediately after a recipient park is identified. This responsibility of preparing a job description for the 2-year training portion of the program will be that of the Survey Historian, PCH who will consult with other members of the Individual Committee and SWCRC staff during the process. The recipient superintendent will be responsible for preparing a position description, in consultation with the Center's staff, that will become effective upon completion of the 2-year training program.

Recruitment for interns will be managed by the Southwest Region's Division of Personnel and will follow normal procedures set forth in the National Park Servicewide Career Development and Placement Plan. Qualified individuals are those who meet the qualification standards set forth by the Office of Personnel Management for any of the cultural disciplines at the grade level determined for each position. In addition to, and regardless of, an applicant's specialty and/or expertise, supplemental information will be requested in order to better evaluate the candidates' commitment to cultural resource preservation. The supplemental information will be a written statement which details the applicants' reasons for applying.

Classification of the intern's responsibilities while in training and after placement at a park will most likely result in establishment of a Park Ranger position with an organizational title of Cultural Resource Management Specialist. The target grade will vary according to the needs of the recipient park. Entry level will also vary based on the applicant's qualifications. The range of progression is expected to be GS-7/9/11.

A detailed yet flexible IDP will be prepared on a position-by-position basis shortly after selection of the intern. The precise qualifications and skills that interns are expected to possess after completion of each phase will be clearly stated in the IDP and carefully evaluated at predetermined intervals throughout the program. Success in meeting these goals could be judged by such actions as written and verbal testing, formal classroom grading, on-the-job performance ratings, etc., and will be defined in the IDP.

Direct supervision and evaluation for the 2-year internship rests with the Survey Historian, PCH, in consultation with the intern's Individual Committee and various instructors. An intern is expected to be fully capable of analyzing cultural resource management problems and rendering knowledgeable decisions or recommendations to management. Successful cultural resource trainees will be formally integrated with the recipient park's staff at the end of two years. The position will remain at the park and its function unchanged unless otherwise determined by a formal management evaluation. If a position is vacated early enough in the training process to make it worthwhile to immediately fill the position with another intern, then this will be done. When it is determined not feasible, the park will recompete for future interns with all other Southwest Region areas.

It will be made very clear from the beginning of each training venture that the intern will not be placed or retained in a cultural resource management specialist position if he or she cannot adequately demonstrate possession of the skills and knowledge necessary to perform the duties of such a position.

ADMINISTRATION

The general administration of the training program will be undertaken by the Southwest Cultural Resources Center (SWCRC) in Santa Fe. The SWCRC is particularly well-suited for such a program in that it is presently the only multidisciplinary cultural resource center in the National Park Service. Its staff consists of experts in all relevant fields of cultural resource preservation including archeology, history, resource conservation, submerged cultural resources, remote sensing, and automated data processing. Also readily available to the SWCRC are professionals in planning, interpretation, curation, natural resources, as well as other regional office specialties.

This diversity of professional expertise will be made available individually to each of the participants through the development of personal IDPs. In turn, the specialists in the SWCRC will be able to utilize a portion of each trainee's time during on-the-job training to assist in carrying out their own responsibilities in cultural resource preservation. This one-on-one capability is felt to be the most effective method of training and will be emphasized as much as possible in each intern's personal program.

Within the SWCRC, specific day-to-day program administration will be located at the offices of the Divisions of History, in Santa Fe, and Cultural Research, in Albuquerque. These functions, including coordination of the intern's schedule, can be accommodated by existing staff.

PROGRAM SCHEDULE

The schedule will coincide with the fiscal year calendar as much as possible in order to be consistent with budget and funding processes. Selection of the first intern is contingent on approval of this proposal and necessary recruitment time. Therefore, the initiation of the first intern's program will be delayed and thus offset several months. The initial program is slated for a 5-year period beginning in FY 86 and will ultimately result in the placement of four cultural resource management specialists in park areas in the Southwest Region. Funding and FTE will be sought from the Washington Office for the following internships.

FY 86 - one intern
FY 87 - trainee carried over from FY 85 plus another new intern
FY 88 - trainee carried over from FY 86 plus another new intern
FY 89 - trainee carried over from FY 87 plus another new intern
FY 90 - trainee carried over from FY 88

PROGRAM EVALUATION

The Division of History will coordinate ongoing scheduled evaluations undertaken by joint efforts of the Southwest Cultural Resources Center staff, all management levels (including WASO), park managers, instructors of the trainees, and the trainees themselves. As an integral park of the program's success in producing CRM specialists, an evaluation of the recipient parks' cultural resource program will be made for three consecutive years following placement of the intern at the park. This will include the continued evaluation of the trainee's performance, the superintendent's utilization of the trained intern and assessment of all tangible benefits derived. This type of evaluation provides quick feedback that will be used to continually modify the training strategy, thus improving the program's effectiveness.

The program's viability will be determined by evaluating cultural resource management in the three parks that will have received fully trained personnel by the beginning of calendar year 1990. This comprehensive evaluation will be made in the same manner and by the same entities listed above. A formal report will be prepared for the Director by the close of FY 90.

The goals of the program in terms of the benefits discussed in the previous sections will comprise the majority of standards used to evaluate the program's merit. Other aspects such as bridging the working relationship between cultural specialists and managers, the interactions with other intensive training programs and program expansion will also be carefully examined.

ESTIMATED COSTS AND POSITIONS REQUIRED

Estimated costs of column items in Appendix A were made using the following criteria: the average grade of an intern as GS-9 ($21,000); benefits for interns figured at 11.5%; travel and per diem for each intern computed for 6 months per year at $50 per day; and travel and per diem for each short-term trainee computed for 2 months per year at $50 per day. Travel for participating instructors is very difficult to estimate but will undoubtedly be incurred. A conservative amount of $2600 for the first year is suggested with slight increases over the following years to accommodate an anticipated increase in awareness and participation of the program. Travel and per diem costs for instructors who directly handle an intern's training in a field situation are included since existing limited travel funds are inadequate for these assignments. The Individual Committee will closely monitor such travel expenses to insure that this training program does not fund regional projects.

Training positions (i.e., the FTE) will remain in the cultural resource training program and be used in a revolving manner. The salary, benefits, FTE, etc., of an intern will become the obligation of the park upon the intern's completion the 2-year training period. Therefore, the recipient park superintendent is responsible for insuring that funding and FTE requests are incorporated in that park's budget. The superintendent must submit the necessary paperwork at the ealiest notification that his or her park will be a recipient park in order to include the cost and FTE in the park's normal budget cycle.

The overall regional increase for the full 5-year period will be six full-time FTE: two of which will be in the SWCRC filled on a rotating basis by interns and four of which will be requested by superintendents to accommodate incoming trained personnel. With respect to the latter, it may happen that an existing park position can be redescribed as a cultural resource management specialist if those types of duties are identified as a substantial portion of the current responsibilities. However, it is crucial to the purpose of this program not to anticipate such a situation nor allow such circumstances to be a determining factor in the placement of trained interns.

Appendix A

BUDGET LINE ITEMS

				travel and per diem		
fiscal year	FTE	salaries	benefits	trainees	instructors	totals
86	1	$21,000	$2,400	$9,000	$2,600	$35,000
87	2	42,000	4,800	24,000	3,200	74,000
88	2	44,000	5,000	25,000	4,000	78,000
89	2	46,000	5,300	27,000	4,500	82,800
90*	2	48,000	5,500	29,000	5,000	87,500
90**	1	24,000	2,800	15,000	5,000	46,000

* if the program continues after the scheduled fifth-year evaluation.
** if the program is discontinued after the close of the fifth year.

THREATS TO CULTURAL RESOURCES

APRIL, 1982

INTRODUCTION

The Threats to Cultural Resources Report has been compiled from several data sources: the Threats to the Parks Survey, Superintendents' Annual Report, interviews with park staff, and firsthand knowledge of the Washington Office staff. Return of the questionnaire was very good, with 311 of 331 park areas responding. Small parks with limited resources were specific about threats to resources, while large parks with many resources gave generalized answers.

The questionnaire, sent to the parks in 1980, queried staff about the value and extent of threats to the Park System's cultural resources. It was modeled after one designed by the Division of Natural Resources (Washington Office). The lack of park staff with professional competence in historic architecture, archeology, and curation meant that the questionnaire was often completed by individuals unable to recognize and assess the problems. This observation is pointed out by an example from the North Atlantic Region. With 37 percent of the Service's park-based curatorial staff, that Region identified a greater percentage of problems than did other regions. Due to this situation, we feel that the survey results probably underestimate the magnitude of the problems.

There are common problems that most parks experience, and the examples enumerated in this report, we believe, are representative of the problems throughout the System. We have cited examples from all types and sizes of parks and from all geographical regions. Very few parks lack cultural resources.

Of the 331 parks in the System, 190 have been established to preserve nationally significant historic or prehistoric cultural resources. Both natural and recreational areas of the System possess significant historic or prehistoric cultural resources, and some of these resources are known to be of national significance. This report, however, emphasizes the historic areas of the System. Basic sources of threats have been grouped into broad categories. By identifying sources, solutions can be developed in a systematic manner and applied Servicewide. Suggestions for dealing with some of the threats will be discussed in the summary section.

VANDALISM

Many park superintendents have reported an increasing rate of vandalism with a resultant increase in damage to or destruction of cultural resources. In some parks, structures have been damaged beyond repair. Vandalism has resulted in battered doors, broken windows, missing and damaged fabric (especially metals of value, such as copper), graffiti splattered walls, and fire damage or destruction. At Jefferson National Expansion Memorial National Historic Site, vandals carved their initials and other graffiti into the stainless steel cladding of the legs of the Gateway Arch. At Cuyahoga Valley National Recreation Area and Delaware Water Gap National Recreation Area, several historic structures have been destroyed by arson.

The destruction of park interpretive signs is common throughout the System. Parks such as Colonial National Historical Park, Petersburg National Battlefield, and Manassas National Battlefield Park report the almost constant assault on park interpretive signs. While these signs in themselves are not part of the cultural resources of the parks, their repair and replacement draw staff time and money from the care of other park resources.

Earthworks at Colonial, Petersburg, Valley Forge, Kennesaw Mountain National Battlefield Park, and Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park are being eroded by increasing foot and vehicular traffic. Some, such as those in Kennesaw Mountain's Cheatham hill area, have almost entirely disappeared.

Coastal fortifications at Gateway and Golden Gate National Recreation Areas seem favored by vandals--metal objects and concrete and brickwork are favorite targets. The increasing vandalism rate in the parks forces superintendents to channel scarce funds into park protective activities and away from preservation activities. Thus, while the safety of the public is maintained, the resources that attract the public to the parks deteriorate or are lost through lack of maintenance.

Digging for and collecting artifacts is increasing, particularly in the historic battlefields and archeological areas of the parks. Smaller park staffs and lower fuel consumption goals resulting in less frequent patrolling of the parks are blamed for much of this rise in vandalism. And while illegal collecting is increasing, the parks have no reporting system to document or quantify the threat.

Many parks lack adequate evaluative inventories of their archeological resources. Because of this, park managers are unable to determine which archeological resources are significant and warrant preservation and protection. A lack of knowledge of the location and significance of these archeological resources makes it difficult to establish cost effective monitors for identifying threats to the resources and to develop action plans to arrest deterioration of significant resources.

Lack of data on the resources in a park also hampers thorough planning for management and protection of those resources. Lowell National Historical Park, Rocky Mountain National Park, Theodore Roosevelt National Park, Walnut Canyon National Monument, Olympic National Park, Piscataway Park, and Rock Creek Parkway have reported this absence of data as being a problem in adequately managing their cultural resources, especially archeological sites.

EFFECTS OF URBANIZATION AND COMMERCIAL LAND USE

Many of our parks are threatened by increasing industrial, commercial, and residential development on and near their boundaries. More and more, the significant historic landscapes preserved in our historical parks are becoming an island of green in a sea of development. They attract such increasingly incompatible uses of the parks as casual recreation, heavy traffic on park roads, and visual intrusion of modern structures on the significant historic scene. General degradation of park historic resources is the result.

At Petersburg, Kennesaw Mountain, and Valley Forge National Historical Park, casual recreational pressures on the parks from surrounding urban populations are intense, and result in serious overcrowding. On occasion, some superintendents have closed parks in the interest of public safety. Such recreational activities as kite flying, frisbee throwing, sunbathing, and car repairing adversely affect the visitor's enjoyment and understanding of the parks' historical significance. Some of these activities tend to erode earthworks or similar fragile elements of the cultural landscape of the parks.

Coping with local commuter traffic has become increasingly difficult in some of the parks. Valley Forge National Historical Park, Cuyahoga Valley

National Recreation Area, Chickamauga and Chattanooga National Military Park, and Manassas National Battlefield Park report that they must deal with this knotty problem daily. Their roads, serving as local commuter access highways, have become conduits for large volumes of through traffic. This high-speed commuter traffic superimposed on slow-moving park visitor traffic results in hazardous conditions. In addition, many of our parks now burdened with these commuter traffic problems are under state and local pressure to widen and straighten park roads. In many instances, such construction will cut through historic vistas and demolish historic structures.

The intrusion of modern development on the historic scene preserved by our parks is an ever increasing problem. At Gettysburg National Military Park, a private developer built a high rise observation tower that can be seen from all areas of the park. At Fredericksburg and Spotsylvania, a new shopping center will be built within a thousand yards of Chatham, the historic home of the Fitzhugh family; another shopping center has already been completed west of the Salem Church; and new home construction continues in the Wilderness Battlefield area of the park. At Ocmulgee National Monument, train and vehicular traffic within the park distracts and disrupts the visitor's experience and movement about the park.

Extraction and transportation of fossil fuels and minerals near Chaco Culture National Historical Park create ground vibrations that threaten the stability of the nationally significant prehistoric structures of this park. Bentonite clay, the predominant soil, is very unstable and has a very low failure point. Ground vibrations lower this failure point still further. The major prehistoric Chacoan pueblo structures are built on this clay. Vibrations from blasting to remove coal and other mineral resources adjacent to Chaco

Canyon can cause the bentonite clay to fail, and in turn, cause the 12th-century ruins to collapse.

OTHER FEDERAL AGENCIES

Other Federal agencies, continue to own, use, and maintain a number of structures in the parks. While this relationship has almost always proved beneficial for the structures, some have deteriorated because of a failure of other agencies to comply with historic preservation laws.

In other cases, agencies have failed to maintain, or have altered their historic structures without the advance authorization or knowledge of the Service. For instance, the Coast Guard retained ownership of the light tower at Pictured Rocks National Lakeshore's Au Sable Light Station while turning over ownership of eight other buildings at the station to the Service when the park was established in 1966. These eight buildings have all undergone stabilization by the Service since that time, but the Coast Guard has allowed the tower to deteriorate. Similar situations have occurred at Golden Gate with those structures still managed by the Army.

ENERGY

The Service's present energy and budget restrictions are important factors in the deterioration of historic structures. Inability to provide minimum heat in these structures has caused walls to warp and buckle on the outside, and ceilings to collapse on the inside. At Appomattox Court House National Historical Park, seven authentic and original historic structures are now unheated and are undergoing such serious internal damage as falling plaster and paint, while replicated historic structures are heated and preserved.

Although the Service's energy savings programs have been successful in reducing energy fuels consumption, the resultant fluctuations in temperature and relative humidity have damaged collections. Examples of this problem are given in the following discussion on curatorial problems.

CURATORIAL PROBLEMS

The response from Yosemite National Park, where there is a curator on the staff, summarizes well the various detrimental effects that affect the Service's collections:

> "Objects are generally stored in below-standard conditions. Lack of adequate space is the greatest weakness. Control of the environment is nonexistent. Manuscript and ethnographic material is subjected to extremely low humidity which weakens fibers. During warm weather, artifacts are treated to high temperatures that adversely affect all objects. Insects and fungus infestations have been controlled only partially. Curtailment of energy use would seriously hamper care of the collections."

Collection Management

Of the parks responding to the questionnaire, 12 percent indicated that a lack of policy guidelines and planning documents presents problems in the management of museum collections. Only four percent found this a problem in the Southeast Region, while 42 percent identified it as a problem in the North Atlantic Region (where there are more trained curators capable of recogmizing this problem). Approximately 30 percent of the parks have adequate Scope of Collections Statements while only 10 percent have Collection Preservation Guides, two major planning documents used in collections management. Lack of funds was identified as having an adverse effect on the collections by 21 percent of the parks surveyed.

One of the most important aspects of collections management is accountability for the objects. Park Service standards require that each object receive a unique identifying number and that the object be described on a catalog card. Catalog cards are maintained in the park with a copy being forwarded to the National Catalog Vault in Harpers Ferry. However, the Survey indicates that only 20 percent of the parks have documentation and catalog records that are up-to-date. The 700,000 catalog cards on file in the central National Catalog repository indicate that less than 10 percent of the estimated 10 million objects in park collections are actually cataloged. The primary factor precluding completion of this task is the lack of personnel trained in curatorial procedures for cataloging and inventorying collections--a factor that, interestingly, was identified by the parks as a greater problem than the lack of funds.

Internal/External Environment

Curtailment of energy use was seen as a major threat to museum collections by 14 percent of the parks responding (ranging from 6 percent in the Rocky Mountain Region to 44 percent in the Mid-Atlantic Region). The primary impact of energy savings programs has been to curtail the use of temperature and relative humidity controls, causing damage to collections.

Curtailment of energy in museum storage and display areas as a means to save funds continues despite the fact that museums may be exempted, on application, from Federal energy policies. Of the parks responding, 29 percent indicated that extremes in relative humidity were damaging their collections. The damage attributed to relative humidity was identified as a problem by 10 percent of the parks in the Southwest Region, and by 80 percent of the parks in the North Atlantic Region. Likewise, 24 percent of the parks responding indicated that fluctuating temperatures were damaging to the objects. The range varied from 7 percent of the parks in the Pacific Northwest Region to 76 percent of the parks in the North Atlantic Region.

The lack of an operational humidification/dehumidification system at the Home of Franklin D. Roosevelt National Historic Site has resulted in internal relative humidity fluctuations ranging from 18 to 86 percent. This wide variation in relative humidity has done extensive damage to the collections. Along with the usual twisting and checking of wood and loss of veneer, there have been significant losses of gold leaf, polychrome and lacquered surfaces. The lack of temperature control in the warmer months, with the consequent opening of windows and doors, has resulted in high filth levels and damp conditions in the collections.

In Death Valley National Monument, temperatures inside historic structures range from 80°F to 110°F. None of the rooms containing collections have climate control systems even though sensitive materials are stored in these rooms. The daytime use of evaporative coolers raises the humidity level to 60 percent. When the coolers are turned off at night, the humidity drops to 10 percent. The resultant swelling and shrinking of oil paintings and furnishings cause flaking and cracking.

At the Statue of Liberty National Monument, the staff notes that relative humidity varies seasonally between 20 and 70 percent. Temperatures vary unpredictably between 55°F and 90°F. These fluctuations have further deteriorated artifacts and shortened the effective lifetime of adhesives used in exhibits.

Weather and Air Pollution

Though inadequate interior museum environments have the most prevalent negative impact on museum objects, such exterior environmental factors as weather and air pollution also affect museum collections. Of the parks responding, 14 percent indicated that weather has such negative impacts, presumably directly attributable to problems caused by variations in temperature and relative humidity as described previously.

In the Western and North Atlantic Regions, 26 percent of the parks indicated that weather is a problem. This response may be correlated since many of the museums in these two regions are located in maritime areas where humid, salty air can severely affect objects.

At War in the Pacific National Historic Site, metal objects--field guns, cannons, and bomb casings--are stored in sheds where they are constantly exposed to salt air and are therefore rusting. In San Juan National Historic Site, historical collections, armor, and firearms, as well as the storage cases, are severely rusted due to lack of protection from salt air.

Fourteen percent of the parks indicated that air pollution deteriorates museum collections. The North Atlantic Region (with 46 percent of its parks noting the problems), the Mid-Atlantic Region (with 27 percent), and the National Capital Region (21 percent)--areas of industrial and urban population concentrations--responded to this problem more frequently than did the other regions. Though not specifically identified by the survey, sulfur compounds are usually considered as the most damaging to museum objects. They can cause chemical deterioration of metals, organic materials, calcareous stone (such as marble), and paper.

The staff at the Frederick Law Olmsted National Historic Site notes that:

> "Air pollution is a serious, insidious problem which speeds up the deterioration of the thousands of papers and books in the Olmsted Archives and Libary. Sulfuric acid and dust weaken, embrittle and discolor paper, as well as cloth and leather book bindings. Antique metal duplicating, photography and record-keeping machinery suffer discoloration and corrosion, especially when uncontrolled high relative humidity speeds up the chemical reactions."

Serious dust problems are relatively infrequent with only 4 percent of the parks reporting such a problem. The highest percentage was reported in the North Atlantic Region (11 percent). The fine airborne dust from volcanoes is a threat to collections in Alaska (13 percent), the Pacific Northwest Region (30 percent), the Western Region (2 percent), and the Rocky Mountain Region (3 percent).

Natural and Artificial Lighting

The deteriorating effects of light were identified as a serious problem by 10 percent of the parks--from a low of 3 percent of the parks in the Midwest Region to a high of 33 percent in the Mid-Atlantic Region. Fading and embrittlement of organic materials caused by ultra-violet light from both natural sunlight and florescent lighting is the primary problem. Several parks indicated that they have noted extensive deterioration due to light, but do not have the resources to counter it. These results may again be explained by the untrained employee and thus unaware employee being given responsibility for completing the questionnaire.

Collections Storage

Overcrowded and substandard storage was also identified for its deleterious affects on objects. In numerous parks, object storage is relegated to attics, basements, and crawl spaces. Not only do these spaces lack proper temperature, relative humidity, dust and security controls, but the stacking of objects and awkward handling to move objects in and out of storage guarantees damage. Such storage areas exist at many parks. Prime examples are at Union Station (in Washington, D.C.) where the Lincoln Collection is stored, at Shenandoah National Park, Yosemite National Park, and the National Maritime Museum (Golden Gate National Recreation Area).

Inherent vice, a factor inherent to the object that causes deterioration, is a very real threat that is often overlooked. Most of the paper documents in the Park Service are self-destructing due to the acid in the paper. Nitrate negatives in photographic collections cause a similar problem. They deteriorate over time and become highly flammable.

Use Impact and Security

One of the most important factors in insuring the preservation of objects is minimizing the impact which use may have on those objects. Exhibits, loans, research, and interpretive programs may all threaten the security and shorten the longevity of objects. A lack of preservation and security-oriented design was cited as a problem by seven percent of the parks. Vicksburg National Military Park notes that: "Objects on display in the Cairo Museum are threatened by extremes and fluctuations in relative humidity. If the problem is not corrected, artifacts will require frequent costly preservation and suffer considerable damage over a period of time.

Damage sustained to museum objects through lending programs has been minimal, due primarily to Service policies which proscribe the use and care of loaned objects. Only three percent of the parks responding indicate that loans of objects to other institutions create a threat to the preservation of collections. Likewise, only three percent of the parks responding indicate that use of objects in interpretive programs poses a serious threat to the collections. This reflects the Service's prohibitions against the use of original objects for interpretive purposes.

Security of Collections

In addition to problems caused by lack of environmental control and barriers of handling, the lack of security for exhibits is a major problem. Of the parks reporting, 18 percent indicate that vandalism and theft are a problem. Hampton National Historic Site reports that: "Fire and security alarm systems are inadequate and the possibility of loss or degradation is high. The park experienced a theft of $75,000 worth of museum objects in 1979." A recent survey in the National Capital Region indicated that, because most parks do not have accurate catalog and inventory records, they are unaware of the thefts and cannot account for museum property.

Mitigation

The problems associated with museum collections in the National Park System are long-festering wounds that are now just beginning to be treated. A major step forward occurred recently with the bolstering of the staff of the Division of Curatorial Services in the Washington Office which will permit a better focus on Servicewide curatorial problems. Moreover, the increase in money this year through the Park Restorations and Improvement Program has permitted the Washington Office to allot funds to the care of curatorial objects. For example, $75,000 has been sent to two western regions to copy and store nitrate negatives.

More policy direction from Washington and greater overall attention to the Service's curatorial collections will slowly mitigate or eliminate many of the problems plaguing them. It will take time to solve these problems which have been building for more than two decades.

NATURAL CATASTROPHIES

In the area of natural disasters, floods, tornadoes and hurricanes, fires, earthquakes, and volcanoes cause a minor but noticeable threat to the museum collections. Overall, 12 percent of the respondents indicated that floods threaten their collections.

One percent of the parks view tornadoes and hurricanes as a serious threat to cultural resources. External fires, such as range fires, threaten four percent of the parks. Earthquakes are a major threat primarily in the Western Region (15 percent) and the Rocky Mountain Region (3 percent). Environmental threats are further advanced by the lack of staff at the park level to monitor and ultimately correct these conditions.

Many historic structures are in high-risk earthquake zones. Earthquakes have caused some damage to the St. Louis Courthouse, Taft Home, Lowell National Historical Park, and Scotty's Castle (Death Valley National Monument). Most historic structures were not constructed to meet earthquake codes.

While natural fires damage historic structures, the majority of fire damage is caused by people. Electrical fires have caused losses at the Home of

Franklin D. Roosevelt--the barn burned to the ground in the early 1970's, and the roof burned off the house in 1982. Electrical fire also damaged the Stage Coach Inn at Harpers Ferry National Historical Park. At St. Croix National Monument several years ago, two runaways from Canada let a fire get away from them which destroyed most of the structures of the old light station.

Severe storms, especially northeasters, with rain, winds, and waves, sometimes in conjuction with high tides, also cause damage.

At Apostle Island National Lakeshore, Lake Superior storms and ice have caused extensive damage to historic light stations. The Raspberry Island dock has washed out several times through storm and ice action. The boathouse has also been damaged in this way. The Michigan Island light station tramway has been severely damaged through fall storms and spring ice conditions. Much of the embankment has washed away, making it impossible to replace the dock and tramway as they originally were. The Outer Island dock is presently endangered by heavy wave and ice action which are undermining the structure. In the past, severe fall and spring storms have damaged the south landing breakwall on Devils Island, the Outer Island light station dock and tramway, and have completely destroyed the Michigan Island light station dock, boathouse, and the base of the tramway.

Erosion is a natural process that is threatening several major resources. The seawall at Fort McHenry National Monument and Historic Shrine was extensively damaged by tropical storm David in 1979. Damage has not been completely repaired and another storm could threaten the fort proper, though money is programmed this year to do much of the remaining repair work. At Shiloh National Military Park, a major prehistoric Indian mound will eventually slump into the Tennessee River. The erosion process in this particular instance has been quickened by wave action from the wakes of barge tugs and fluctuating water levels caused by the nearby dam.

At Katmai National Monument, a National Register listed archeological site is being eroded away by natural river processes, and prehistoric Indian sites are being eroded away by surf action at Acadia National Park. Beach erosion threatens the historic lighthouse at Cape Hatteras National Seashore and many of the historical coastal fortifications at Sandy Hook (Gateway National Recreation Area). This erosion is a natural and ongoing process, and is extremely difficult and costly to check.

Little can be done about these natural disasters, either to control them or to mitigate their effects, but once they have occurred, they leave damage to historic structures that has to be repaired.

EFFECTS OF PLANTS AND ANIMALS ON RESOURCES

Vegetation can break structures apart when it is allowed to creep into cracks and crevices, and historic scenes have been changed as individual structures and landscapes are affected by encroaching vegetation. For example, vegetation is slowly destroying historic fortifications at Golden Gate National Recreation Area, Gulf Island, Fort Washington, and Fort Hancock.

Pests, such as clothes moths and rodents, as well as mold, were noted as problems in six percent of the parks. The greatest problems were identified by the North Atlantic and Mid-Atlantic Regions which recorded approximately 20 percent of their parks with insect infestations and mold growths on objects and interiors of historic structures. At Ft. Raleigh National Historic Site, inadequate housekeeping and the lack of monitoring by staff recently led to a serious beetle infestation; and the accumulations of food, dust and hair in the exhibits attracted other pests. At Fort McHenry and Harpers Ferry, leather objects are threatened by mold growths.

At Fort Laramie National Historic Site, large volumes of bat droppings continue to be a problem inside the refurnished structures. Not only a continuing housekeeping problem, the situation also poses a health threat to visitors who may be bitten by the bats or who may inhale or ingest microorganisms from the bat dung.

MANAGEMENT CONSTRAINTS

Many parks do not contain all of the historic resources important to those parks within their authorized boundaries.

At Manassas, critical park boundaries along park approaches are threatened by development unless they can be purchased soon. Authorized legislation has been passed by the Congress, but funds to purchase these lands are not now available. The same situation exists at War in the Pacific National Historic Park on Guam where land prices are escalating even more rapidly.

At Martin Luther King, Jr., National Historic Site and Boston National Historical Park, pressure from local government officials and developers has resulted in the destruction of many adjacent historic properties and the introduction of noncompatible elements into park areas which tend to degrade and distort the historic scene.

Park budgets have not kept pace with inflation. Salaries, fuel costs, and supply costs have all increased enormously over the past few years with resultant park budgets being spread dangerously thin. Parks such as Morristown National Historical Park, and the Sandy Hook unit of Gateway National Recreation Area report the need to hire more cultural resources management specialists in the areas of archeology, history, curation, and historic architecture.

POSITIONS AND FUNDING

The lack of professional and para-professional positions is a key problem in the adequate preservation of significant historic and prehistoric structures, and many of the problems enumerated in this report could have been eliminated or mitigated had there been curators and architects available to identify problems and devise solutions.

As of the end of the 1981 fiscal year, there were 98 filled professional and para-professional positions (historical architects, architectural conservators, preservation specialists, and archeologists) Servicewide that were directly involved with the treatment of historic and prehistoric structures (stabilization, preservation, restoration, reconstruction, and maintenance). Sixty-eight percent of these positions (67) were permanent, while thirty-two percent (31) were temporary. Yet, this group must cope with over 10,000 historic and prehistoric structures.

Of the above-mentioned 98 specialists, 35 (36 percent) have been with the Service for less than five years; 28 (29 percent) for less than ten years;

and 35 (36 percent) longer than ten years. Many of the latter have worked in key positions without needed training in current historic preservation practices. The regional offices (including the archeological centers) and the Washington Office have 38 positions and the Denver Service Center has 39 positions. This represents the lion's share of the Park Service's cultural resources management specialists. Only 21 positions (15 historians and 6 archeologists) are scattered among the more than 300 park units. This averages out to over 200 currently inventoried historic structures for every professional or para-professional position involved in preservation treatment.

About 60 percent of the parks were set aside for their historic or prehistoric cultural values. Most of the remaining 40 percent of the parks have important historic structures. Almost all of these parks have significant prehistoric archeological resources which reflect the more than 15,000 years of Native American habitation of North America, but there are only 58 historians and 34 archeologists employed in cultural resources management activities associated with inventory, evaluation, and preservation of these resources. Ninety-two full-time employees, or one for every three parks, are professionally active historians or archeologists.

Thirty percent of the parks report the lack of trained personnel as a major factor in the management of museum objects. Personnel records, however, indicate that 86 percent of the parks lack trained curatorial staff. Thus, a key problem is the lack of trained field curators who can identify collection preservation problems and make them known to management. Accordingly, the magnitude of the collecion preservation problem is believed to be significantly understated in the reports received from the field.

BASIC DATA COLLECTION AND DISSEMINATION

List of Classified Structures

The List of Classified Structures (LCS), the Park Service's inventory of all above ground historic and prehistoric structures in the System, is probably only seventy-five percent complete. In 1976, it was estimated that 25 million dollars was needed Servicewide just to make essential repairs to arrest the most critical deterioration problems. It was also estimated in 1976 that 275.5 million dollars were required to bring these structures up to preservation maintenance standards. We estimate that the probable dollar needs have increased three to four times over the 1976 figures. However, these figures should be used with some caution. They are indicators of the scope and magnitude of the problem, but not a suggestion for massive infusion of dollars into the Service's budget.

Location, inventory, and evaluation of historic and prehistoric resources are essential first steps in their preservation and protection. Surveys undertaken for the List of Classified Structures constitute a portion of the National Park Service's mandate under provisions of Executive Order 11593 and the National Historic Preservation Act 1980 Amendment requirement to locate, inventory, and evaluate historic structures. While the LCS presently contains over 12,000 structures, an estimated 4,000 structures remain to be identified and evaluated. Notable gaps in the List include parks acquired after 1976 (the new Alaska parks, for example, represent a block of missing data). Over 60 parks still do not list any historic structures, and of these, over 25 are clearly historical parks. For example, none of the pre-Columbian ruins in Mesa Verde National Park have been entered on the LCS. The evaluation inventories are essential to provide park managers with the information they need to develop realistic, feasible, and fiscally responsible plans to preserve and protect significant cultural resources.

The lack of this completed inventory hampers the proper management of these cultural resources. The available list has been categorized into four groups. This categorization has facilitated the identification of those essential structures that should receive work. We need to identify and categorize the remaining structures not inventoried so as to determine the ones that should be treated.

CONCLUSIONS AND RECOMMENDATIONS

To read a report on the threats to the parks of the National Park System can leave one with a feeling of depression. But the reader should not be depressed, for there are things happening that bode well in the long term for historic sites, structures, and objects. The Park Restoration and Improvement Program (PRIP) will not only solve some immediate problems in cultural resources management, but more importantly will point the way to the future in the care of historic sites, structures, and objects. This program will permit the Service to shift its emphasis from the construction approach to the preservation approach. In time, this shift will have a profound effect upon the way the Service manages cultural resources, for it will place a greater emphasis on bringing the various types of cultural resources to a level where they can be maintained. Since the work has to be done at the regional level, it will bring cultural resource professionals closer to the resources on which they work.

The keys to good preservation is a stable and sufficient staff of professionals and para-professionals, and a steady and reliable infusion of funds. These objectives will permit a consistent care for cultural resources that, in the long run, will be less expensive than the past procedure of letting structures decline and then pouring vast sums of money into them to bring them to a satisfactory level of repair.

Another program we hope will be inplemented soon is the commercial adaptive use of historic structures. Brought about by legislation, this program will permit lease money to be used for the care of structures in the Park System that are on the National Register. It will not be a panacea for the problems of preserving historic structures, but it will help substantially, and we are pleased to have this legislative authority.

Threats to the cultural resources vary from park to park and region to region. The statistics from the survey seem to underestimate the magnitude of the threats to museum objects due primarily to the lack of trained staff to assess the problems. Two major factors stand out as the most critical threats to museum objects at the present time. These are: (1) the lack of accountability for the objects due to the absence of catalog records; and (2) the lack of environmental control, especially in the areas of temperature and relative humidity. The solutions to these problems are not complex. The Park Service already has sound policies and programs to insure the preservation of museum objects. Additional trained curatorial personnel and the provision of proper environments for collections are the solution to this problem.

Though s[illegible] of the cataloging and preservation work can be done through contra[illegible]t is necessary to increase the number of trained professional staff for hands-on preservation work. The Service needs to add approximately 70 curators and conservators to its staff over the next five to seven years. These people would be assigned to regional and park offices.

Preparation of a basic inventory and catalog of museum objects is essential to establish accountability for the Service's museum collections, and accountability should be the highest priority for this program. Emphasis should be placed on providing the resources to inventory collections and to complete the development and implementation of a Servicewide National Catalog.

The need for baseline inventory data is essential for all categories of cultural resources. Completion of the List of Classified Structures and a sustained and measured pace of evaluative inventories of cultural resources would enable park managers to develop and implement realistic and feasible programs to preserve and protect these significant historic and prehistoric cultural resources.

In the area of environmental factors, baseline data should be collected through Servicewide monitoring that will provide substantive information on environmental threats, e.g., temperature, relative humidity, light, air pollution, erosion, and pests. Once baseline data is collected, measures must be taken to eliminate, control, or mitigate these factors.

The Service should develop a program to:

(a) measure and monitor architectural deterioration;

(b) ascertain the causes of this deterioration; and

(c) assess methods to prevent and/or remedy this deterioration.

This work should concentrate on identifying pollutant related damages to metals, masonry, and coatings such as paint, through controlled field exposure tests; monitoring of specific historic structures with potential pollutant related problems, such as San Antonio Missions, Independence

National Historical Park, and the Statue of Liberty; and laboratory experiments to determine possible mechanisms of deterioration. Later phases of the work will evaluate the performance of available treatments in corrosive environments.

A more comprehensive training program should be developed. Presently, there are two Servicewide courses available (cultural resources management and a section on cultural resources in the intake training course) that address all facets of cultural resources. Courses should be developed to instruct park managers and their staffs in the basic requirements for the preservation and protection of cultural resources.

Specialized courses for maintenance personnel on preservation and cyclic maintenance treatment of historic structures or paraprofessional archeological training for park staff employees are offered by a couple of the regions. These courses should be formalized and offered, or perhaps required, for all field personnel, especially to second line supervisors who deal directly with resources.

To curb vandalism, an aggressive educational program to sensitize the public to the waste and destruction that is occurring may be effective. Some acts of vandalism are malicious and probably nothing can be done to deter these individuals; but many vandals cause damage through ignorance, and education may be a solution.

A systematic monitoring and reporting procedure needs to be established for determining extent and occurrence of vandalism. Most cases don't reach the magnitude that triggers an incident report; but in order to document and deter the problem, all cases need to be recorded.

Senator **Domenici**. Thank you very much. Those suggestions that are attached will be made a part of the record along with your statement. I appreciate that. Ted Davis, president of Save the Jemez, Albuquerque.

STATEMENT OF TED DAVIS, SAVE THE JEMEZ

Mr. **Davis**. Senator Domenici and Senator Bingaman, thank you very much for holding this hearing here in Albuquerque. I want to first discuss a little bit about the cultural resources on Forest Service land in region 3. As you know, region three includes New Mexico and Arizona. The archeological sites on these Federal lands are extraordinary, both in their numbers and in their physical dimensions. They compare easily to the more famous units of our National Park System lands located, for example, in Bandelier, Chaco National Historic Park and Mesa Verde. It is a quirk of history, that, for example, the sites on Forest Service lands in the western division of the Santa Fe National Forest, popularly known as the Jemez Mountains, did not become part of the National Park System as initially proposed by Senator Carter through Federal legislation in 1916.

A few facts about the cultural resources only in the Jemez Mountains are, that it's predicted there are approximately 10 times more archeological sites on the Santa Fe National Forest than in Chaco and Bandelier Monuments combined. Also, within an 8-mile radius of Jemez Springs, there are nine ruins that will average between 1,000 and 2,000 rooms in size. There is one ruin west of Jemez Springs that is very large, Pueblo Bonito. I have illustrated for you on this diagram the size comparison of Chaco Canyon Pueblo and Pueblo Bonito just to show the size. Pueblo Bonito being here and Chaco and Bandelier being back here. You can see Chaco would comfortably sit within the plaza space.

In addition, another important aspect of the Santa Fe National Forest is that the Pueblo Indians of New Mexico are descendants of the people who inhabited these sites high in the mountain areas and in the valleys.

On August 1, 1984, Save the Jemez, New Mexico Archeological Council, The All Indian Pueblo Council, Jemez Pueblo and the Sierra Club filed suit against the Forest Service for violation of the National Historical Preservation Act, a fact that has come out several times in the testimony. We had uncovered information and the 50-year Santa Fe Forest Plan, and we subsequently obtained information through deposition of Forest Service employees that there was a persistent pattern in violation of the National Historical Preservation Act. In addition to violations of the Act and failure to survey sites before ground disturbing projects proceeded, a number of projects had also been damaged. The estimate on the Santa Fe Forest alone is up to 500 sites damaged or destroyed within the last several years by Forest Service sanctioned, funded or otherwise supported activities.

We hope that this lawsuit, whether completed through our settlement negotiations, which are currently underway and look promising, or through prosecution, will be able to turn around and change the momentum of the Forest Service and get it to recognize the importance of its other responsibilities on its lands. Particularly, in this case, the preservation and protection of this incredible archeological resource. As I said before, as great as anything in our national parks system.

I have heard some rumblings that our suit may trigger interest in trying to modify or weaken the National Historical Preservation Act of the implementing regulations. I hope that this is not the case and it is certainly not our intention. By our examination of the law we feel that it is a fair law. Our concern is that until recently the Forest Service in this region has not had enough experience in obeying this law to know its cost or its impact. But certainly, we have to examine the value of this treasure that we have already discussed.

Two more quick points. I sympathize with Mr. Dutton from Duke City and the National Forest Products Association about his concerns. It was not, Senator Domeninci, our lawsuit that brought a halt to any activities. It's a violation of Federal law that did. Also, in this area, we have a very marginal timber base. The lands on most of our national forests in New Mexico do not support the sort of tree growth and size of tree and density of tree that you get in the basic Northwest and we can't accept that this sort of timber output is feasible or possible in a fragile desert environment as it would be in the Pacific Northwest.

The final point is, once again, I urge and ask for assistance from you, Senator Domenici. Senator Bingaman has brought up the possibility of a fair, public discussion of the upcoming Santa Fe Forest Plan which is due to be released in January. We would like to urge again that the Forest Service hold the public hearing on this issue. There is a unique situation here and you people understand how important it is for constituents to be able to speak their mind on the record. We have the most likely people to be impacted by implementation of any plan, the pueblo people and the local community people who do not generally have access to typewriters, word processors and other mechanisms of expressing their opinion, but they are extremely eloquent when they speak on the record. And I believe they should be provided an opportunity to do so in a formal hearing.

The current hearings and meetings we greatly appreciate and we have enjoyed an opportunity to provide input to the Forest Service, but I think this other mechanism is slightly critical, especially in this particular situation. Thank you very much.

Senator **Domenici**. Thank you very much. Mark Michel, Archeological Conservancy, Santa Fe.

STATEMENT OF MARK MICHEL, PRESIDENT, ARCHAEOLOGY CONSERVANCY

Mr. **Michel**. My name is Mark Michel. I am the president of the Archeological Conservancy, a private nonprofit corporation with national headquarters in Santa Fe, New Mexico. The Conservancy requires and preserves endangered archeological sites through the United States. It is the only national organization that does so. I have some written testimony that I would like to submit for the record, Mr. Chairman, and I would summarize my remarks for the committee here today.

I would like to discuss the dramatic destruction of archeological sites throughout the United States. In many areas, more than 80 percent of major sites have already been destroyed, the research base for America's prehistoric and historic past being irreversably destroyed and if this trend is allowed to continue, within a decade or so a large part of our legacy will be gone forever. The reasons are three.

No. 1, looting, which is illegal on public lands, thanks to the efforts of Senator Domenici, and we really appreciate your efforts in the passage of that legislation, but it is still legal on private lands. However, I see looting as the least important cause of the destruction of archeological sites.

The second cause is agriculture, and this is particularly prevalent in the Midwest and the South, where large machinery and land leveling techniques are destroying tremendous numbers of archeological sites, perhaps most of them in States like Arkansas, Ohio, Missouri, and so forth.

And third, is development which on private lands is legal, and which since modern man came to these shores has been a major reason for destroying archeological sites and the reason is very simple, you know, prehistoric man chose the same locations as modern man to build its homes for exactly the same reasons and we have heard quite a bit today about illegal construction by development on Government lands and something needs to be done about that. But the vast majority of presites are on private land, and the major effort should be made to protect them if we are going to have anything left at all of our legacy in this country. If we do not act quickly, it would be too late. Perhaps it is already.

I have a four-point program I would like to propose to the committee to deal with preservation of archeological sites throughout the United States, not just in New Mexico. In fact, New Mexico is probably in better shape concerning preservation of archeological sites than any other State in the country.

The Federal Government should first establish a national system of archeological preserves, similar to our current and very successful system of wildlife preserves. That is, acquire major sites that are now on private land and preserve them. Do not develop them, do not let tourists on them, preserve them for the future. Total acreage involved for the whole country would probably be about equal to one major wildlife refuge in the United States. This would also solve a lot of curation problems that have been talked about today, Senator, because the best way to curate archeological rights is in situ, in the ground.

The second thing that should be done is to fund the historical groups in cities, States, universities, and organizations like mine. These funds provide matching grants to help these kind of organizations acquire and preserve archeological sites on private lands. They were cut off in 1981. Buildings, historic buildings were taken care of as a result of that through tax credits which will equal a tax savings in excess of $200 million this year alone. However, that's very successful for historic buildings, it has no effect whatsoever on archeological site preservation.

Two million dollars a year in matching grants would do a great deal. It would, for example, allow the City of Albuquerque to purchase the last remaining Tiguex Pueblo ruin. It would allow the archeological State parks system to develop a major Mississippian park and it would allow my organization to purchase and preserve two or three times the number of sites we are doing today.

The third thing we should do, I think, is to expand the Chaco idea that Senator Domenici authorized in his legislation in 1980. That was an idea to have the National Parks Service preserve not just individual sites, but an entire culture and by bringing in the 33 outliers in your bill, Senator Domenici, I think that's what you have done. I think we ought to have a system of cultural parks throughout the country that might include Mesa Verde in Colorado, Caddo in Texas, Mississippian in Mississippi River Valley and Hopewell in Ohio and so forth.

However, I must say that it is unfortunate that almost nothing has been done to implement the 1980 Chaco legislation after 5 years in December since it was signed into law.

The fourth thing that needs to be done is more enforcement of ARPA and I will let my colleague next to me discuss that, I think. Thank you very much.

[The prepared statement of Mr. Michel follows:]

TESTIMONY OF

Mark Michel, President
The Archaeological Conservancy
Santa Fe, New Mexico

before the

Public Lands, Reserved Water and Resource Conservation Subcommittee
Committee on Energy and Natural Resources
United States Senate

Albuquerque, New Mexico
October 14, 1985

Mr. Chairman, members of the committee. My name is Mark Michel. I am President of The Archaeological Conservancy located in Santa Fe, New Mexico. I want to thank you for giving me the opportunity to testify here today.

The Archaeological Conservancy, a non-profit corporation, was formed in 1979 to acquire and permanently preserve the best remaining archaeological sites that are located on private lands. In the past five years, we have acquired, by purchase or donation, thirty sites in eleven states, mainly in the Midwest and the Southwest. We now have over 4,000 members. Other than a Challenge Grant from the National Endowment for the Humanities, we receive no government funds, and our activities are supported by private donations.

I would like to discuss with you today the dramatic destruction of America's prehistoric heritage. When Europeans first came to these shores they found numerous native cultures -- and evidence of great cultures that existed long before.

The first to scientifically explore these ruins was Thomas Jefferson, who wrote of them in his Journals. He rightly concluded that these great ruins were not of European origin as many believed at the time, but of past great native civilizations that flourished and failed.

In 1847, the new Smithsonian Institution issued its first publication, Ancient Monuments of the Ohio and Mississippi Valleys. They documented about 20,000 ancient mound sites in the Midwest. Today, less than 200 remain.

Fifty years ago, there were hundreds of Caddoan culture sites in Oklahoma, Texas, Arkansas and Louisiana. We have recently completed a survey of those that remain. We have found less than twenty in even fair condition.

When Coronado came to the Rio Grande here where Albuquerque is today, he found fourteen pueblo towns he called the province of Tiquex. He fought a war with them and spent the winter of 1540-41 in one of their towns. We can only find the ruins of two today.

Along the Southern California coast, there were dozens of Chumash villages when the Europeans came. Today there are no ruins remaining on the coast at all. Only a handful of inland sites remain.

In some areas of the country, more than 80 percent of the prehistoric ruins have already been destroyed. In the Southwest, more remain, but they are being destroyed at an alarming rate.

What happened to them, these remains of past American cultures? They have been destroyed in three primary ways.

First, the ruins of prehistoric cultures tend to be located in the same kind of places and for the same reasons as those of our culture. Urban development has destroyed many and continues to destroy whatever gets in its path.

Second, modern agricultural practices utilizing huge machines and landleveling have destroyed hundreds if not thousands of ruins in the past forty years -- mainly in the South and Midwest.

Thirdly, in the past twenty years there has been a dramatic increase in the commercial looting of prehistoric ruins for valuable artifacts. These artifacts are sold to collectors in the United States, Europe and Japan. Like looted artifacts from Mexico, Egypt and Greece, prehistoric American artifacts often bring a good price and are sought after for their artistic value as well as their investment potential. In the process of collecting these artifacts, commercial looters often use mechanical equipment and completely destroy the scientific information contained in these sites.

Looting is not confined to the Southwest, but is a national problem. When it is done on public lands, it is illegal, and we need to enforce the law. But when done on private lands with the permission of the landowner, it is entirely legal. This is the most common method of looting -- legally on private lands. The effects are the same. The scientific information is destroyed.

What then can be done to protect what little is left of America's prehistoric legacy?

The answer is this -- the federal government must take an active role in acquiring and preserving archaeological ruins.

Fifty years ago, the federal government made a commitment to preserving wildlife and began establishing national wildlife refuges. The Endangered Species Act was passed. Habitat was purchased that enabled many species to recover. Strict laws were adopted that controlled indiscriminate slaughter. Let me remind you of the species that were almost lost before action was taken--the bison, alligator, elk, bald eagle and whooping crane to name just a few. There are more deer in the United States today than at any time since the Declaration of Independence.

Archaeological ruins will not recover like endangered species. Once destroyed, there is nothing that can recreate the information that was found in these sites. What we save in the next ten years will likely be all that remains of these past cultures.

Organizations like The Archaeological Conservancy can play an important part, but it is foolish to assume that private actions alone can do the job. The private sector is shrinking at a time when competition for private funds is increasing dramatically.

The greatest problem in archaeological site protection is on private lands, because most of the sites are on private lands subject to the whims of the owners. There is virtually no protection of archaeological sites on private lands, nor can there be. The only solution to to acquire those sites and permanently preserve them.

Sites on public lands have been protected since the Antiquities Act of 1906. This protection was greatly improved by the passage of the Archaeological Resources Protection Act of 1979, thanks to Senator Domenici and Congressman Udall. While any act can be improved, the basic need here is effective enforcement.

I am proposing a four point program to preserve the most important of the Nation's archaeological remains:

1. The federal government, through the National Park Service or some new agency, should establish a system of archaeological preserves similar to the nature preserves we now have. These preserves would protect cultural resources in situ for future study. They would small, cheap and easy to administer, because all that is needed to preserve them is to acquire the land and stabilize the ruins. They would not be open to the public, but saved for the future.

Let me stress that we are not talking about vast sums of money. Archaeological sites are small--usually less than twenty acres. The total acreage to be acquired in the entire United States would be less than one average wildlife refuge.

2. The National Park Service should expand the idea embodied in the Chaco Culture National Historical Park bill adopted in 1980 and sponsored by Senator Domenici. This bill authorized the protection of 33 Chacoan outliers (smaller Chacoan culture sites often located many miles from Chaco Canyon). This cultural approach to park management is the right one and should be extended to include such cultures as the Mesa Verde in Colorado, the Caddo in Texas and Oklahoma, the Hopewell in Ohio, the Mississippian in the Mississippi River Valley and many more.

Unfortunately, the Chaco legislation of 1980 has yet to be implemented. Of the 33 outliers to be protected, only one has been in the five years since the adoption of the act. It was purchased and protected by The Archaeological Conservancy. At least one of the 33 has been completely destroyed by looters. The 1980 legislation should be amended to transfer all the outliers to the National Park Service to be administered by Chaco Culture National Historical Park as a single unit.

3. Congress should appropriate funds under the Historic Preservation Act of 1965 to provide matching funds to state and local governments, universities and museums, and private organizations to acquire and preserve archaeological sites. Funding for this program was cut off in 1981.

Congress substituted tax incentives for grants to help with the preservation of historic buildings. This has been a very successful program. This year we will make more than $200 million in tax expenditures for the historic preservation of buildings. This should continue, but it does nothing to preserve archaeological sites. Grants should be restored for this purpose. The federal expenditure would be multiplied by private funds on a matching formula. A modest sum of only $2 million per year would accomplish much.

If the matching programs were still in place, the City of Albuquerque would be able to purchase the remaining Tiguex Pueblo ruin. The Archaeological Conservancy would be able to triple the number of projects it does annually. Arkansas State Parks could go forward with a planned Mississippian culture project.

4. Enforcement of the Archaeological Resources Protection Act must be stepped up. Federal agencies empowered with enforcement of this legislation, primarily the Bureau of Land Management and the National Forest Service, have seen their budgets decline over the last four years. Often the first to go has been enforcement personnel and staff archaeologists. The result has been a clear signal to commercial looters to go back in business.

One high BLM official in Denver was recently quoted in U.S. News and World Report as saying, "We don't have the funding, time, money or real desire to be cops." She proposed public education as an alternative. There is no education program, nor is there an enforcement program. I would submit to you that the education that is needed are some good prosecutions.

The Justice Department has also been lax in prosecuting looters who are apprehended. A New Mexico case is one of the worst examples, where a looter was caught red-handed and the U.S. Attorney's office refused to prosecute.

The Justice Department needs to instigate undercover operations to break up rings of professional looters and the dealers who create the market for looted artifacts. They now operate with virtual impunity. Only when dealers and collectors are prosecuted, will looting subside.

Time is quickly running out for the sites of America's past cultures. If Congress does not act quickly and forcefully, there will be little left to save.

Thank you for giving me the opportunity to appear here today. I will be happy to answer any questions of the committee.

Senator DOMENICI. Thank you. Mr. Robert Collins.

STATEMENT OF ROBERT COLLINS, ATTORNEY

Mr. COLLINS. Mr. Chairman, Senator Bingaman, I'm Bob Collins. I'm an attorney here in Albuquerque with the firm of Miller, Stratvert, Torgerson & Brandt. Senator Domenici's son-in-law works for me. From 1975 to 1979, I was Assistant United States Attorney, and I had the good fortune to be able to prosecute a number of people involved in antiquities violations and I prosecuted cases involving BLM land, Forest Service Land and Park Service land. I also had the chance to work with Senator Bingaman, Laura Beaty, and Senator Bumpers on legislation being passed back in 1979 and to testify before the Senate Subcommittee on Parks and the House subcommittee.

I think ARPA is an excellent act. I think it's a wonderful act and I think it provides the vehicle for the Forest Service, the BLM and the Interior to effectively curb the antiquities violations that are occurring in this country. I think it provides an option for civil and criminal penalties to strike not only at those who would dig on the national forests, but also those who would traffic, buy and sell antiquities. But the problem with the act now is one of enforcement, and I think there're several things that can be identified as a problem. Obviously, the Forest Service, the Bureau of Land Management, Department of Interior do not have sufficient money to adequately and effectively enforce the act. To give you an idea, the Bureau of Land Management, when I was assistant U.S. attorney, had one law enforcement officer for four States and he spent most of his time chasing wild horses. Now they have doubled their staff to two. The Forest Service simply does not have sufficient law enforcement type people on the national parks to effectively enforce this law. In fact, they can't even scratch the surface.

I think what we need in general appropriations for the Department of Agriculture and for the Department of Interior as a budget line item, would be for law enforcement, law enforcement of acts such as ARPA. This would provide for many more law enforcement officers which are needed. You, for instance, the Forest Service who I am most familiar with, you should have one full-time law enforcement officer on every forest, and in every ranger district, you should have one level-four officer. That is with a law enforcement background with the ability to arrest and carry a firearm. Also you need money so as to carry out sting operations. The act was drafted, it was designed to get those people who deal with illegal artifacts, who sell them, who buy them, who traffic in them and who make the big money. If you can dry that up, the idea is you wouldn't have people going onto the ruins and the sites and excavating them and stealing artifacts.

So you need money to carry out the sting operations and to enforce task forces in various areas. It works very simply. For example, say in Santa Fe or Scottsdale, AZ. If you had a dealer that was suspected in dealing with illegally obtained artifacts, you would simply have to send a law enforcement officer in there and offer to sell him an artifact, saying it came off the national forest. Once he purchased that artifact, just like you deal with heroin or any other illegal activity, he could be arrested and I guarantee you with one prosecution in Santa Fe and one in Scottsdale, there wouldn't be a whole lot of illegally obtained artifacts being passed in those cities.

Second, I think the Senators have to put more pressure upon the Justice Department to take an active role in the enforcement of this act. That is to get the FBI involved in prosecuting these cases. You need to put pressure on the local U.S. attorneys to take an interest in the prosecution of antiquities violations. I think it needs to be brought to their attention and they need to be encouraged through the U.S. Senate to take a role, take a guiding role in curbing this looting of our national historic treasures. Thank you very much.

Senator DOMENICI. Thank you, Bob. It was a pleasure to have you up there in Washington when we were working on this. Isn't it interesting, as people analyze it, suggesting what the remaining problems are, we had heard most of them. We talked about private land, as you recall. We made it a Federal crime to take artifacts from some private property that had archeological value, and that took a long time up there. You remember that took an awful long time and you had just either lost a case or were going to try one, as I recall, when you all came up there to tell us about it. So I think the law is written pretty well. I think the question is whether we have enough manpower to enforce it and whether it's given high enough priority, and I think you have hit both of them on the head. I think you are right on both counts.

Let's announce here for anybody that's a baseball fan that you still have time to see something important because at the top of the fifth the score is 2 to 2.

Dr. Carol Condie, Quivira Research Center.

Take all the time you like so long as it's not over 3 minutes.

STATEMENT OF DR. CAROL J. CONDIE, QUIVIRA RESEARCH CENTER

Dr. CONDIE. My name is Carol Condie, and I am speaking today on behalf of New Mexico Archeological Council and American Society for Conservation Archeology. Let me say first that we really genuinely appreciate both of our Senators bringing this oversight hearing to Albuquerque.

Historic and prehistoric sites in the United States are in very serious trouble. Even though both Republican and Democratic Congresses and Presidents have repeatedly recognized over and over again over the last 110 years that there is major importance in protecting our archeological sites because it was an irreplaceable heritage, archeological sites are perhaps now in greater danger than they ever have been before in the history of our Nation. I won't go into all the reasons. We have a dramatic population increase and all those things.

However, we have another problem. Soon after the president administration took office, what I feel is a methodical program was initiated to destroy Federal programs that protect archeological sites. I can identify several major approaches to this. The first is that massive changes were made almost immediately and are still continuing in the implementing of regulations. The legislation wasn't touched. Just the regulations. The changes were made and it was then declared that these changes were in compliance with whatever the relevant cultural resources legislation was and in fact, very often the changes caused the regulations to be entirely out of compliance.

The second major thing that I have seen is redirection through fiscal manipulation. Many Federal programs have been reduced, as we are all aware, but in some agencies, cultural resource management programs have been reduced far out of proportion to other programs. That legislation by allocation is, indeed, the intent in spite of the strong mandate that Congress feels it has given to Federal agencies seems quite obvious.

The third technique which is a change in attitude toward cultural resources and Federal law is more subtle and I think a little more difficult to see, but the results are perhaps even more pervasive and more devastating because of that. Signals were sent out very early in this administration that protecting cultural resources was not going to be a major goal. There are numerous results of this, but I will give only two examples that I think will illustrate for you what the nature of this has been.

In several cases, Federal employees who were naive enough to go to work for Federal agencies and believe that their agency really intended for them to obey the Federal law have sometimes been harassed and hounded until they resigned or they have been transferred to very ugly places, which is a technique we are all aware of. Some agencies have, from time to time, systematically rid themselves of every employee who is knowledgeable about cultural resources and about Federal law, and of course, if you are left with a bunch of dummies, then obviously you are not going to enforce the law.

Another agency has hit on the system of using what they call para-archeologists to perform compliance work. Now these para-archeologists are employees who are professionals in other fields. Their training is not in archeological fields. They are all college degree people, but fields like range management and forestry and things like that. So they are sent out to do archeological clearance work. However, because they almost never possess formal degrees in anthropology, they are less likely to recognize an archeological site when they see one, and second, because they are from other areas, other professions within this agency, they often have vested interests themselves in wanting to see an area cleared. So they have two good reasons for not locating archeological sites.

This is an odd thing to do, it seems to me, because in a time of very restricted budgets, this agency seems to be willing to spend a great deal of money to avoid meeting its legal obligations. And this is the reason I say this. Para-archeologists are nearly always more highly paid than staff, formally trained staff archeologists. Their salaries come out of the budgets for their programs, not out of the archeological programs So if this agency ends up paying a great deal more to have archeological compliance work performed than it would have cost them if they had had their own trained professionals do it.

I should probably add that this agency does not permit archeologists or anyone else to act as paraland managers, paragame and fish managers, para-foresters, para-whatever. People are aware of the fiercely protective stances taken toward archeological sites by many nations who are much poorer than we are, for instance, England, China, Mexico, Japan, France, Spain, even Russia, believe it or not, has a good historic preservation program.

I often ask archeologists, "How on earth can the United States let this wholesale destruction of archeological sites occur?" This is something that has worried me a lot and I'm sure other archeologists, and we have tried to take care of that. I think one answer to this might be that most of our archeological sites are in quite remote areas. They are not in the middle of cities. Sites don't shriek as they die. They are not like baby seals. They don't die dramatically in hospitals with AIDS, for instance, or tragically under bridges and in alleys. They usually die quietly in silent forests or on plains or deserts at some distance from cities with perhaps a blade or backhoe operator or drag line operator as witness and that's it. Since sites don't speak for themselves, and the voices of archeologists seem to be fairly new and fairly weak with our legacy, our cultural resources are rapidly losing the battle.

Finally, what can be done to ensure the congressional mandates are carried out? We have a few recommendations that we would like to submit as a beginning. The first is either alter existing legislation or enact new legislation with wording that is so specific that it cannot be regulated out of existence by reinterpretation of the implementing regulations, which is what has been happening. For example, wording in the legislation itself, not just in the regulations, but in the legislation needs to stipulate that Federal agencies are required to identify and protect all national register eligible properties, whether or not they are at this moment on the national register. That in itself would help a lot.

Senator DOMENICI. Would you kind of expedite, please. You are about twice your testimony, but we let you go on. Could you kind of summarize in 1 minute, please?

Dr. CONDIE. This is all written down.

Senator DOMENICI. Did you have some last summary of the part you were looking at? We will make the whole statement part of the record.

Dr. CONDIE. Why don't you go ahead and make the statement part of the record. It was going to be a listing of items.

Senator DOMENICI. I appreciate that. Thank you very much. We will make it part of the record.

[The prepared statement of Dr. Condie follows:]

TESTIMONY OF CAROL J. CONDIE ON BEHALF OF NEW MEXICO ARCHEOLOGICAL COUNCIL AND AMERICAN SOCIETY FOR CONSERVATION ARCHAEOLOGY BEFORE THE PUBLIC LANDS, RESERVED WATER AND RESOURCE CONSERVATION SUBCOMMITTEE OF THE U.S. SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES, OVERSIGHT HEARING, OCTOBER 14, 1985, ALBUQUERQUE, NEW MEXICO

On behalf of New Mexico Archeological Council, an organization of 250 professional archeologists working in New Mexico, and American Society for Conservation Archaeology, a national organization of professional archeologists, I would like to express our appreciation for the opportunity to present testimony at this oversight hearing.

Historic and prehistoric sites in the U.S. are in serious trouble. Even though both Republican and Democratic congresses and presidents have repeatedly recognized over the last 110 years the importance of protecting our irreplaceable heritage, archeological sites are now in greater danger than ever before.

Soon after the present administration took office a methodical program was initiated to destroy federal programs that protect archeological sites. The onslaught has come from multiple directions:

1. Massive changes have been made in the implementing regulations. The changes are then "declared" to constitute compliance with cultural resources legislation, when, in fact, they may achieve the exact reverse.

2. Redirection has been accomplished through fiscal means. Many federal programs have been reduced, but cultural resource management programs have often been reduced in extreme disproportion. That "legislation by allocation" is the intent, in spite of

the mandate Congress has given the federal agencies, is obvious.

3. The third technique--a change in attitude toward cultural resources and federal law--is more subtle in basis but the results are perhaps even more devastating than those of the two overt devices. Signals were sent out early in this administration that protecting cultural resource sites was not a goal to be sought after. Two examples can represent the results of this pervasive change in attitude:

- In several cases federal employees naive enough to take seriously their agency's obligation to obey federal law have been hounded, transferred, or harrassed into resigning. Some agencies have systematically rid themselves of employees possessing expertise in archeology and in cultural resources law.

- One agency has hit upon the system of using "para-archeologists" to perform compliance work. Para-archeologists are employees who are professionals in fields like range management, forestry, etc. Because they rarely possess formal training as anthropologists, they are less likely to recognize archeological sites when they see them and they are quite likely to have vested interests in NOT locating sites. Oddly enough, in a time of restricted budgets, this agency seems willing to expend large amounts of its limited funds to circumvent its legal obligations. Para-archeologists are nearly always more highly paid than staff archeologists. Since their salaries come out of the budgets for their own programs, rather than the archeological programs, the agency pays several times what it would cost to have trained professional archeologists perform compliance work. (It should be added that this agency does not permit archeologists--or anyone else--to act as para-land managers, para-game and fish managers, or para-foresters.)

People who are aware of the fiercely protective stance taken toward archeological sites by many nations much poorer than the U.S.--England, China, Mexico, France, Spain, Russia, Peru, to name only a few--often ask archeologists how the U.S. can permit wholesale destruction of our past. One answer may be that many of our archeological sites are in remote areas. Sites don't shriek as they die, nor do they die dramatically in hospitals or, pathetically, under bridges. They usually die quietly in silent forests or on plains and deserts distant from cities, with only a blade or backhoe operator as witness. Since sites cannot speak for themselves and the voices of archeologists are few and weak, our legacy from the past is rapidly losing the battle.

What can be done to ensure that congressional mandates are carried out? We propose the following recommendations as a beginning:

1. Either alter existing legislation or enact new legislation, with wording so specific that it cannot be regulated out of existence by "reinterpretation" of the implementiug regulations. For example, wording in the legislation itself needs to stipulate that federal agencies are required to identify and protect all National Register-eligible sites whether or not they are listed on the National Register.

2. Require federal agencies to maintain professional cultural resources staffs sufficient to carry out the congressional

mandates (e.g., one archeologist per a specific number of acres).

3. Earmark specific funds under archeological programs to be used for staff training programs in remedial actions for disturbed and damaged sites, prompt stabilization of all damaged sites, and programs in aggressive pursuit and arrest of looters. These responsibilities are now so scattered in some agencies that site protection is lost in the shuffle.

4. Require federal agencies to permit only trained archeologists to perform compliance duties.

5. Instruct the Office of Technology Assessment to investigate the level of agency compliance with cultural resources legislation. Then, establish a program to monitor and assess federal agencies' performance annually (e.g., number of sites located, number of sites nominated to the National Register, number of damaged sites reported, number of damaged sites repaired, number of sites tested and/or excavated, number of qualified personnel on staff, etc.). We have now had enough experience in cultural resources management in the U.S. that answers to questions like these would provide an instant assessment of an agency's performance.

6. Simplify procedures for listing sites on the National Register. Some agencies have found that regardless of how good their intentions, succeeding in actual listing of sites is far more time consuming and expensive than should be necessary.

Senator **Domenici**. What is the Quivira Research Center?

Dr. **Condie**. That is an organization that does contract archeology.

Senator **Domenici**. That's who you are with?

Dr. **Condie**. Yes, but I'm speaking for New Mexico Archeological Council and American Science for Conservation Archeology.

Senator **Domenici**. What do you do for a living?

Dr. **Condie**. Contract archeology.

Senator **Domenici**. I have no intention of taking a great deal of time. I just wonder if I have this right. Doctor Raymond Thompson was representing the Society of American Archeology and the American Association of Museums and I think he had a statement in here suggesting that we have the best archeological preservation system in the world by far, and you didn't mean to imply because China is preserving something, that they are doing it better than the United States, did you?

Dr. **Condie**. As a matter of fact, yes, I did.

Senator **Domenici**. Have you seen the things like the big city that emperors used to live in? Have you gone through that?

Dr. **Condie**. No, I haven't gone through that.

Senator **Domenici**. You think that's being preserved well? Perhaps you have been on the Ming Tombs. Fantastic place and they aren't sure yet how they want to preserve it. They aren't even sure where they are going next. I really accept your testimony, but I think when you mean to imply that countries around the world are spending more and doing more than the United States, I just unequivocally think you are wrong.

Dr. **Condie**. I think there are some countries that are spending much more in relation to the funds that they have available than we are in relation to the funds we have available.

Senator **Domenici**. I thank you very much. Did you have any questions?

Senator **Bingaman**. Let me just ask on a specific item, either Mark Michel or Bob Collins, some of the testimony this morning was that there's presently nothing in the law that permits the Federal Government to interfere with the looting of an outlier, Chaco outlier number—one of them that was looted because it's on private land. Is that something that—is that your understanding of the law? Is that something we need to fix? Should there be some legal prohibition or is there some legal prohibition against an owner of a private piece of land permitting it to be exploited?

Mr. **Michel**. Senator Bingaman, let me address the first question first. The 1980 Chaco Outlier legislation designated 33 outliers to be protected. Roughly 22 of those are on lands owned by the Navajo Nation. Roughly five are on lands owned by the Bureau of Land Management and roughly five or six are on privately owned lands. The site in question, Morris Forty-one is a site that is on privately owned lands, and was being looted shortly after the passage of this act by a man who bought it and is taking it apart with a backhoe. As far as I know, he is still at work on it today, but I don't think there is anything much left of it. The act specifically required the Secretary of the Interior to intervene in a case like that and acquire that land and stop that looting, but nothing was done, and after 5 years, nothing has been done. That site is gone, and the act specifically required in its language that the Secretary do that.

Senator Bingaman. That's just limited to the Chaco outlier. In general, a private land owner is permitted to do exactly that under our present statute.

Mr. Michel. That's right. That's why I am advocating the system of acquiring to preserve sites on private lands where I see the largest problem in the country, not necessarily New Mexico, but in the country today.

Senator Domenici. I think that's correct. Let me just ask the representative of the Park Service, is he still here? Bob, how did you interpret the language in section C(2). It said the Secretary shall acquire fee title to any such private property only if it is necessary to prevent direct and material damage to or destruction of Chaco cultural resource, with cooperative agreement with the owner of the private property.

Mr. Kerr. I think we are interpreting that we should make attempts and the BLM made attempts. Matt Millenbach made attempts with the land owner to acquire that property and without the premise of condemnation, unless the land owner was willing to sell, donate or exchange there was no methodology by which we could acquire the private property to stop the looting. I think that's correct, isn't it?

Mr. Millenbach. What happened was we were in protracting negotiations with the land owner, and after the oil and gas went up there in the late 1970's, property values took quite a dive and we were not able to reach an agreement on the exchange value of the property. He was asking something on the area of $2,700 an acre. Our appraised price was $1,000 an acre and although the legislation allows us to exchange less than fair market value, we thought that was too great a disparity in value to exchange.

Senator Domenici. Isn't there condemnation authority?

Mr. Millenbach. No, sir.

Senator Domenici. No condemnation authority for that section?

Mr. Kerr. No, sir. Not that I read in it, at least. If it is, it's implied and we didn't read it that way.

Senator Bingaman. Let me just ask. I guess Bob and Mark were both very active in the drafting of ARPA. Is it your view that the statute is adequate as presently written, and we do not need amendments to it at this time or to the Historic Preservation Act?

Mr. Collins. That's my view.

Mr. Michel. Anything could use some work, but I think it's generally a very good act and I don't see changes of any significance at all that I would propose in that act. Senator Domenici talked about it later, I would like to see going beyond public lands, but there's no realistic possibility of doing that and I don't see any point in opening that up at this point.

Mr. Collins. In fact, Senator, there was a question about what the term knowingly meant. It was very carefully drafted to be a general intent crime and not a specific intent crime and that is, one doesn't need to know that it's Forest Service land or that it's a crime to go on the land or it's a crime to loot artifacts. One simply didn't have to be curious. One simply had to know what they were doing, that is digging in a pile and so it's a well-drafted act, I believe.

Senator **Domenici**. Mark, just by way of personal information, I would be interested in getting something from your organization with reference to comparables to Chaco. I'm just not sufficiently familiar.

Mr. **Michel**. Other cultures.

Senator **Domenici**. You mentioned Mesa Verde and if you would just send me something. I don't have a lot of time, but I can't conceive the relevance.

Mr. **Michel**. We have to work fast, though. We are just getting ready to start a new program in east Texas where there were literally hundreds of these Caddo sites as early as 50 years ago. We just completed a survey and we have been able to find only four that remain in Texas.

[Subsequent to the hearing Mr. Michel submitted the following:]

The Archaeological Conservancy
415 Orchard Drive
Santa Fe, New Mexico 87501
(505) 982 3278

October 21, 1985

The Honorable Pete Domenici
United States Senate
Washington, DC 20510

Dear Senator Domenici:

I want to express my deep appreciation to you for holding the oversight hearing on problems in archaeology in Albuquerque last week. I thought it was very productive in exposing some of the critical issues involved.

You asked me to send you some information regarding other cultures that might be managed in a way similar to the Chaco culture plan you devised in 1980 that treats an entire culture rather than individual sites. I strongly believe that this is the correct way to manage archaeological sites in the National Park Service and with other agencies. Most prehistoric cultures were rather wide spread, not just an individual site or two. Elements of an entire culture should be managed as one unit, as the Chaco plan envisions.

Here are a few examples:

1. Mesa Verde culture, Colorado -- The ruins preserved in Mesa Verde National Park are only a small percentage of the total culture. The largest Mesa Verde ruins are in the Montezuma Valley around Cortez. We know of seven huge Mesa Verde towns that were undoubtedly the center of the culture. Each of these has more kivas and ruins than everything in the park. Of these seven, two are owned by NPS, two are owned by BLM, two were recently acquired by The Archaeological Conservancy, and one is still privately owned. Little research has been done on them, but what little is known indicates a very complex and sophisticated culture.

2. Hopewell culture, Ohio -- Around Chillicothe, Ohio are the ruins of a great moundbuilder culture that was at its peak around A.D. 1. Most have been destroyed, but NPS is now studying the remaining sites to see if they can be added to Mound City Group National Monument as research units.

3. Caddo culture, Texas -- Northeast of Dallas are a number of Caddo culture village and civic-ceremonial centers. Most have already been destroyed, but the Conservancy and the

Texas State Historical Commission are working to preserve the best that remain. They would be suitable for a national park unit along the lines of Chaco.

4. Hohokam culture, Arizona -- Between Phoenix and Tucson are a number of very large Hohokam culture sites that were once part of a great network linked together by a vast system of irrigation canals. Casa Grande National Monument is the best preserved of these, but there are many more.

These are a few of the more obvious examples of prehistoric culture groups that would best be preserved and managed on a cultural basis.

Thanks again for holding the hearing, and if I can be of any help please let me know.

Sincerely,

Mark

Mark Michel
President

cc: Mr. Tony Bevinetto

Senator DOMENICI. We thank you very much for your attendance. Our last panel is Dr. Richard Watson, San Juan College, Farmington; Peter Robinson, University of Colorado Museum at Boulder; Harley Armstrong, Museum of Western Colorado, Grand Junction.

Could you introduce yourself to us, please.

STATEMENT OF DR. RICHARD P. WATSON, DIRECTOR, CULTURAL RESOURCES MANAGEMENT PROGRAM, SAN JUAN COLLEGE

Dr. WATSON. My name is Richard Watson. I'm director of the cultural resources management program at San Juan College in Farmington, NM, and I have been a professional archeologist working in cultural resources management for approximately ten years now. I would like to offer a few observations on the management of cultural resources on Federal lands in the State of New Mexico.

Senator DOMENICI. Please proceed.

Dr. WATSON. It is apparent from the testimony offered here, management of cultural resources is a monumental task. The management of cultural and paleontological resources however is inherently different from the management of other natural resources management. Natural resources such as oil, gas, coal, and timber is undertaken with the express purpose of making these resources available for exploitation. Cultural and paleontological resources, on the other hand, are expressly excluded from use or exploitation by Federal law, except under very special conditions.

These differences in management goals have forced Federal agencies to establish means to mediate the conflicts which arise when the mandated exploitation of one resource encounters the mandated preservation of another. Toward this end, most, if not all Federal agencies in the Southwest have adopted a policy of an avoidance of cultural resources. This policy has led to an attempt to manage impacts rather than resources. As a result, Federal agencies have equated avoidance with preservation and consequently the fulfillment of their management responsibilities. The implementation of avoidance by Federal agencies has become an almost knee-jerk reaction and cannot be considered management, particularly when it is seen as an automatic response to cultural resources. In this vein, it is inappropriate and can be shortsighted. It often tends to deal only with resources endangered by a limited number of human impacts.

Impacts to sites which are not directly and immediately the result of permit or licensed usage of Federal lands are not expressed. Impacts such as natural deterioration are not actively addressed in the management of most cultural Federal resources. With the exception of pot hunting which is now beginning to be addressed as referred, these impacts are not even considered in managing cultural resources in Federal lands. When they are acknowledged such as in the recent forest plans, they are treated in vague and often inadequate fashion which provides no means of addressing the losses of significant cultural resources from other than immediate licensed activities on Federal lands.

Inadequate funding is often provided by most agencies as we have heard today as a result or as the reason in which these resources cannot be managed in any other fashion. That is, in response to other than direct activities licensed by the federal agencies. The inherent conflict between the management of the exploitable and nonexploitable, however, also appears to have played a significant role in the management of the noneconomic resources such as cultural and paleontological sizes. The conflict between the management of these resources, that is exploitable and nonexploitable resources has also led to the prioritization of resource values with the end result that economic resources take precedence over noneconomic resources. This is as it should be, but too often leads to the unnecessary endangerment, damage or destruction of cultural resources.

The development of exploitable resources and the management of cultural resources are not incompatible, provided that the cultural resources are truly managed and not merely avoided by an arbitrary distance which is then defined as management. The management of nonrenewable resources cannot be undertaken with a short term perspective inherent in a knee-jerk policy of avoidance. The avoidance of a significant archeological or paleontological site, for example, by placing a road within 50 to 100 feet of it rather than through it, for example, cannot be described as effective management. While this may accomplish the desired short-term goal of facilitating the development of an exploitable resource, it also serves to endanger the nonrenewable resources by providing access to areas previously inaccessible. I do not object to avoidance as one form of management but suggest that it is too often used as the only means of management of Federal resources.

Examples of how this policy and others regarding the development of exploitable resources and preservation of cultural resources has led to the deterioration and or destruction of cultural resources with the knowledge and in some cases, the blessing of Federal land managing agency. Insufficient time prevents their discussion here, although summaries are present in my written testimony.

I would also like to suggest that as I indicated earlier, funding seems to be a major problem. I would suggest that a funding program based on a small user's fee assessed on all Federal land managers based on the model of the Superfund for the clean up of toxic wastes might be a viable option for dealing with cultural resources and provide additional funds. Thank you.

[The prepared statement of Dr. Watson follows:]

Federal Management of Cultural and Paleontological Resources In the State of New Mexico: A Personal and Professional Perspective, 1985.

Testimony presented to the

Honorable Senator Pete Domenici

and the

Honorable Senator Jeff Bingaman

by

Dr. Richard P. Watson
Director of the
Cultural Resources Management Program
San Juan College, 4601 College Blvd.
Farmington, New Mexico

October 14, 1985

As a professional archaeologist who has worked in cultural resources management for almost ten years, I would like to offer the following observations on how the resources under the jurisdiction of various Federal agencies in the state of New Mexico are being managed.

As is apparent from the testimony offered here today the management of cultural resources is a monumental task, and one which it appears the various land managing agencies have undertaken only with some reluctance. The management of cultural and paleolontological resources is inherently different from the management of other natural resources. The management of natural resources such as oil, gas, coal and timber is undertaken for the express purpose of making these resources available for exploitation. Cultural and paleolontologiocal resources on the other hand are expressly excluded from use or exploitation, by Federal Law except under very special conditions.

These differences in management goals have forced Federal agencies to establish means to mediate the conflicts which arrise when the mandated exploitation of one resource encounters the mandated preservation of another. Toward this end most, if not all Federal agencies in the Southwest, have adopted a policy of avoidance of cultural resources. This policy has lead to an attempt to manage impacts rather than resources. As a result Federal agencies have equated avoidance with preservation and the fulfillment of their management responsibilities. The implementation of a policy of avoidance by Federal agencies has become a knee-jerk reaction and cannot be considered management. It is an inappropriate and short-sighted approach which deals only with resources endangered by a limited number of human impacts. Impacts to sites which are not directly and immediately, the result of the permitted or licensed useage of Federal lands are not addressed. Impacts such as natural deterioration and pot-hunting are not actively addressed in the management of most Federal cultural resources. With the possible exception of pot-hunting, which has been only minimally addressed by most agencies, these impacts are not even considered when managing the cultural resources under their charge. When they are acknowledged, such as in the recent Forest Plans, they are treated in a vague and inadequate fashion which provides no real means of addressing this loss of significant cultural resources.

Inadequate funding is offered by most Federal agencies as to why cultural resources can only be managed in response to the development of other resources. The inherent conflict between the management of exploitable and nonexploitable resources, however, also appears to have played a significant role in the management of the noneconomic resources such as cultural and paleontological sites. The conflict between the management of exploitable and nonexploitable resources has also lead to the prioritization of resource values with the end result that economic resources take precidence over noneconomic resources. This is perhaps as it should be, but too often leads to the unnecessary endangerment, damage or destruction of nonrenewable cultural resources.

The development of exploitable resources and the management of cultural resources are not incompatible, provided that the cultural resources are truly managed and not merely avoided by some arbitrary distance which can be defined as management by the agencies. The management of nonrenewable resources cannot be undertaken with the short-term perspective inherent in a knee-jerk policy of avoidance.

The avoidance of a significant archaeological or paleontological site by placing a road within 100' of it rather than through it, for example, cannot be described as effective management. While this may accomplish the desired short-term goal of facilitating the development of an exploitable resource, it also serves to endanger the nonrenewable resources by providing access to previously inaccessible areas.

Many examples can be offered of how the present policies regarding the development of exploitable resources and the preservation of cultural resources has lead to the deterioration and/or destruction of cultural resources with the knowledge, and in some cases the blessings, of the Federal land managing agency. Insufficient time prevents their discussion here, although a summaries of such cases are presented in my written testimony. In addition a suggestion for a funding program based on a users fee to be accessed on all Federal land users is offered as a source of additional revenues to be earmarked for cultural and environmental resources management.

Thank you.

Case Summaries
for

Federal Management of Cultural and Paleontological Resources In the State of New Mexico: A Personal and Professional Perspective, 1985.

by

Dr. Richard P. Watson, Director
Cultural Resources Management Program
San Juan College, 4601 College Blvd.
Farmington, New Mexico 87401

The following summaries are intended to provide a basis for the above discussion and to illustrate how, in several cases, the preservation of Federal cultural resources has not been well served by the present management system. Supplemental information on each of these cases is available through the San Juan College Cultural Resources Management Program.

The East Side Rincon Site

This site is a large Basketmaker III - Pueblo I (AD 400-900) pit house village which is on Federal lands in the La Plata River Valley of Northwestern New Mexico. The site consists of several large pit houses and other archaeological features exposed in the cut banks of the La Plata River and in the large arroyos which drain into it. It was first identified during the summer of 1984 when the site was brought to the attention of the appropriate Federal agency. The site is presently listed on the New Mexico State Register of Historic Places and has been nominated to the National Register of Historical Places.

This site derives its importance from its potential to contribute information important to our understanding of the BM-III to P-I transition, a poorly understood period in the Four Corners Area. No sites from this important period have been investigated in the La Plata area of Northwestern New Mexico. A recent study completed by the San Juan College Cultural Resources Management Program and the Division of Conservation Archaeology of the San Juan County Museum, indicates that perhaps as many as 50 percent or more of the archaeological sites found in the La Plata River only forty years ago have been destroyed. In light of this startling loss of our national heritage, sites such as the East Side Rincon Site take on even more importance.

This site is presently being rapidly lost to erosion which has exposed a several pithouses and a variety of other smaller features. Since its discovery one pit house has been completely lost and large parts of at least two others have been washed down the La Plata River. Due to the absence of any Federally licensed or permitted project which threatens the integrety of the site, however, the Federal agency cannot, or will not, intervine to prevent the loss of what is obviously a significant site.

In this case the agency cannot even manage the ongoing impacts to the site. Inadequate funding is offered as the reason nothing can be done. I have no doubt that this is indeed the reason, but do not believe that such an important resource should be lost with out at least some attempt to preserve it or to recover the information it contains.

I must also ask. Does the lack of specific funding relieve Federal agencies of their responsibilites under the law to protect significant cultural resources? While largely a rhetorical question, it is one which I feel should be addressed not only in regard to the management of cultural resources.

It is unfortunate indeed that because no Federally sponsored or licensed activity threatens the East Side Rincon Site, the present cultural resources management system cannot, or will not, manage or preserve it.

Pot-hunting on the Navajo Indian Reservation:
The Sanostee Wash Area

Over the past several months I have had the unfortunate opportunity to observe the results of what is obviously an unintentional loop hole in the Federal laws governing the protection of cultural resources. In May of this year I reported evidence of pot-hunting activites in the area of Sanostee, New Mexico to the Navajo Area Office of the Bureau of Indian Affairs (NAO-BIA). At that time several sites, in the vicinity of Sanostee had been damaged by pot-hunting activities. On a subsequent visit in August the extent of pot-hunting was significantly greater and had spread to a large multi-room pueblo site nearby.

Following my reporting of this activity, an employee of the Navajo Nation discovered several Navajo individuals actively potting a site in the same area. In discussions with BIA personnel I have been told that it is unlikely that the individuals involved can be prosecuted under Federal Law since Native Americans are specifically excluded from the prohibitions against damaging sites within their own reservation. It appears that the pots from the Sanostee area are being sold. Representatives of the NAO-BIA and the Navajo Nation has made several visits to the area and have recovered human skeletal remains exposed by the pot-hunting activities.

The cultural resources of the Sanostee Wash area are poorly investigated and are an important link in our understanding of the Pueblo II (AD 900-1100) and Pueblo III (AD 1100-1300) periods. With my recent discovery of a "Chacoan Road" which appears to link this area to the Chacoan Protection Site at Newcomb, New Mexico this area becomes even more important. Estimates by the BIA suggest that there may be perhaps as many as 100 sites per square mile in the Sanostee Wash area. Yet there has been no systematic attempt to evaluate the type, or extent of resources which occur there. In addition to the pot-hunting activities which are presently impacting sites in the area, there is an increasing development of this area with the attendent installation of utilities and other public services which have also impacted important sites.

As in the case of the East Side Rincon Site, the Sanostee Wash area is presently undergoing serious deterioration, but in this case, the Federal agency is prevented from acting by a law which allows Native Americans to destroy our national heritage for profit. Again, because there is no specific Federally licensed or permitted activity which threatens these sites, little can be done.

Bancos Canyon: A Case of Differing Perspectives

This case is perhaps the most disturbing, because unlike the previous examples there appears to be a true conflict between the development of economic and cultural resources to the ultimate detriment of the cultural resources. In July of 1984 the San Juan College, Cultural Resources Management Program was contracted by a private firm to conduct an investigation of archaeological sites on and along an abandoned but existing road on the Jicarilla District of the Carson National Forest. As a result of this investigation, which involved more than 1600 manhours, sixteen archaeological sites where mapped, surface sampled and evaluated with regard to their potential eligibility for inclusion on the National Register of Historic Places and for their utility to address the Forest Research Topics (FRT) developed to guide research on the National Forests of the Southwest Region (Green and Plog 1983).

As a result of this investigation, a management plan was developed and recommended to the Carson Forest for sixteen archaeological sites in Bancos Canyon on the Jicarilla District. Within the proposed management plan, each site was evaluated with regard to its research potential and determined to contain information important to our understanding of prehistory or history as defined by the Forest Reseach Topics described by Green and Plog (1983). As a result it was recommended that all sixteen sites are likely to contain information which would qualify them for inclusion on the National Register of Historic Places. Site specific recommendations were also made to insure that features exposed in the road would be evaluated prior to its reconstruction after several years of abandonment.

In August of this year a site visit by representatives of the Carson Forest, the Advisory Council on Historic Preservation, the New Mexico State Historic Preservation Office (SHPO), the private corporation who wishes to rebuild the road, and an independent archaeological consultant reexamined the Bancos Canyon area. In a letter to the New Mexico State Historic Preservation Officer dated September 12, 1985, Mr. John C. Bedell, the Carson Forest Supervisor, mentions the fifteen sites described in the San Juan College CRMP report (Hooton, Watson, Whitley 1984), but fails to address impacts to all but five. This reevaluation of the Bancos Canyon sites was apparently based on the one day inspection discussed above, as it does not mention any of the recommendations of the earlier report.

The difficulty of evaluating sites from surface indications is is well known to every archaeologist. To attempt to do so after the sites have been systematically collected and severely weathered is extremely difficult. In this case it appears that the management of the cultural resources has taken a backseat to the development of the other resources of the Carson National Forest. The proposed management procedures outlined by Mr. Bedell in his letter to the New Mexico SHPO are not only vague and incomplete but reflect the knee-jerk policy of avoidance so often found in Federal agencies. In this case, however, not only are the sites to be avoided, they are to be ignored. The Bancos Canyon sites are an extreme case of this policy and function well to illustrate its short-comings.

Rather than evaluate the resources as recommended in the proposed management plan, the Forest has chosen to view the treatment of the Bancos Canyon resources in "an experimental vein." No attempt has been made, however, to conduct a realistic or true experiment, by establishing control conditions against which the experimental nature of their management procedures can be accessed. While I am not opposed to the use of archaeological sites for controlled experimentation I do object to the use of sites which may contain unique or highly important information for this purpose. The limited information available on the Bancos Canyon sites suggests that they may fall in this category. Only sites which can be shown through testing or other means to contain information available elsewhere should be used for experimental purposes. It remains to be seen if the Bancos Canyon sites contain such redundant information, and given the proposed Forest management plan for these sites we may never know. I have prepared a letter to the SHPO discussing my concerns for the proposed management of these sites.

The cultural resources of Bancos Canyon are significant for more than the information they contain with regard to the prehistory of New Mexico. In addition they may hold religious and/or cultural significane to the Navajo Tribe. Several of these sites appear to represent some of the earliest Navajo sites yet found in Northwestern New Mexico. The recent renewal among the Navajo of an interest in Dinetah, their traditional homeland may make these sites very significant. Yet the Carson Forest does not appear to be interested in managing the sites which show the greatest evidence of early Navajo occupation, nor to my knowledge have they consulted with the Navajo Tribe regarding the management of these sites beyond that required for San Juan College to obtain a permit to investigate them. There are potentially serious issues of Native American concern with regard to the management of these sites. Failure to properly manage them may have consequences beyond merely failing to preserve and actively manage the Forest's cultural resources.

A Proposal for An Environmental Fund for the Management of Cultural and Natural Resources

As I have described above inadequate funding is often given as the reason for not actively managing cultural resources. After much thought it appears that one possible alternative would be to extend the concept applied to form the Super Fund to develop an Environmental Fund. This fund would be supported by a small fee accessed on the users of public lands much as the producers of toxic wastes contribute to the Super Fund.

I believe it is reasonable to argue that the users of public lands have a responsiblity to preserve it which go beyond the basic requirements of purchasing rights-of-way and resources. The construction of roads is often seen as an improvement, and in many cases this is true, however, the continual opening up of public lands throught the construction of new roads also presents problems of management for Federal agencies which cannot be meet with the available staff. Grazing has been recognized as having adverse effects on cultural resources yet because of the administrative structure of many Federal agencies its archaeological impacts are seldom, if ever, addressed. Off-road vehicle traffic has severely impacted natural as well as cultural resources but because it is a largely unregulated activity on Federal lands, its impacts also go unaddressed. As mentioned above natural forces continue to operate which lead to the destruction and loss of significant cultural resources.

In many cases these factors are accelerated, if not initiated, by the development of exploitable resources on Federal lands. A fund designed to address the needs of environmental management on Federal lands could be easily established and rather painlessly supported by simply accessing a use fee of $0.010 to $0.025 per surface acre per year from licensed and permitted land users.

Several restrictions should be placed on the use of this fund, such as that it applies only to environmental resources, including cultural resources, and that the distribution of the funds would be proportional to the Federal lands within a given management area. Not all of the resources of this fund should be allocated to agency functions. A contingency fund which would function to address pressing, but unanticipated, needs would be an important part of such a program, as in the case of the Super Fund.

The precedent for such a fund has already been established, and recent charges instituted by the Bureau of Land Management for the processing of Rights-of-way further support the concept.

Senator **Domenici**. Thank you very much. We have one additional witness of the two remaining. I don't know which you are.

Mr. **Armstrong**. Harley Armstrong.

Senator **Domenici**. From Grand Junction. Thank you very much for coming down to join us. Would you please proceed.

STATEMENT OF HARLEY ARMSTRONG, CURATOR OF PALEONTOLOGY, MUSEUM OF WESTERN COLORADO

Mr. **Armstrong**. I have sort of a semi-written presentation, but I'm the curator of paleontology at the Museum of Western Colorado on the western side of Grand Junction—of the western slope. I'm also a member of the Colorado Natural Areas Geological Advisory Group and I'm here representing them. It's a group that is made up of professional geologists and paleontologists, and we are there to serve a function in an advisory capacity to various land managers. Our services are free. We do this on a volunteer basis.

Right now, we are working on proposing about 50 natural areas to the State of Colorado, and those are in a period of processing. And also, we are working with the Bureau of Land Management out there on a number of areas of concern. Some of these areas have been included in wilderness areas and some of them have not. We are working on mainly the ones that are not covered by wilderness. There is one area called Rabbit Valley. It's just on the border, just close to Utah. It's within Colorado and it's very rich in its fossil dinosaur resources, and to date, I have heard or seen about 17 different collections from this area, and we have just opened a new exhibit called the Dinosaur Valley Museum, and in this museum, we have a working paleontological laboratory and I work with over 50 volunteers, and am there quite often, 6 days, 7 days a week, and it's been averaging about two accounts a day out here from people that are picking up fossil bones and otherwise disturbing paleontological resources out there and I feel that there's a definite need for some law, and some sort of penalties for disturbance of these things.

There's one case that's being pursued now. A vandalism and theft of some fossil footprints, and unfortunately we have no laws to prosecute this act except for maybe article 33, Theft and Destruction of Government Property. That might be one case that would help. But basically, I wanted to also state that this geological advisory group has a subcommittee which reviews all paleontological permits for the State of Colorado. Jim Matson over in Utah is proposing setting up a regional committee of professionals to review the permits that come in. We feel that these need to be reviewed because certain systems need to be placed on these. Such as—and it was mentioned earlier—driving in with a four-wheel drive truck or something like that. We have cases in Colorado where professional paleontological people bulldoze a road 19 miles to get into the site without getting prior authorization.

So anyway, those are most of my concerns. Basically, I would like to push for some sort of paleontological legislation, and further, to keep the permitting process within the agency that it affects, such as BLM, or the Park Service or something like that. It's good for the general paleontologist that's working in the area to know who is coming in, what they are finding and according to our permits know, these findings have to be reported at the end of the 1 year permit. Permits are only issued for up to 1 year. Thank you very much.

Senator Domenici. Thank you. Senator Bingaman, did you have any questions?

Senator Bingaman. I do not.

Senator Domenici. I just would like to comment to the National Park Service, and BLM—just so we will know my views on the record. I do believe you do have condemnation authority in section 504, I think it is really boilerplate acquisition language for the park and the outliers. And when coupled with section 504C(2) of the act, it provides par mandatory acquisition. Somebody might say the language is slightly different because before acquisition it was suggested that you try to settle out, but it seems clear to me and the two staff members who have been with the committee a long time, and they agree that the boilerplate language coming ahead of it on acquisition clearly gives the right to condemn to the Secretary. But in any event, unless there is something further I want to thank everyone for what I think on this one-day hearing has given us an excellent background on the laws and what's going on.

Obviously, we have to work on it up in Washington, particularly from the standpoint of adequate resources to the Departments. They have shortage of money and many other functions and if we are going to give some special emphasis to the functions discussed here today, clearly we are going to have to get the Congress to go along with more prioritizing in the funding or else it would be very difficult with the mass of problems out there and the pressures to do everything. I want to thank those who come from a long distance to help us, and those who have been patient enough to be here on a holiday and have given most of their day to us. I think ultimately it will help us and you who have to administer the law.

Senator Bingaman, I yield to you for closing remarks and then we will finish.

Senator Bingaman. I will close by saying I echo your thanks for everyone. It was a good hearing. I appreciate you chairing it and I appreciate the subcommittee holding it.

Senator Domenici. Thank you very much. We stand adjourned.

[Whereupon, the hearing was adjourned.]

APPENDIXES

APPENDIX I

Responses to Additional Committee Questions

IN REPLY REFER TO:

United States Department of the Interior 8100 (341/711)

BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

[illegible] DEC [illegible] 3 06

DEC 3 1985

Honorable Malcolm Wallop
Chairman, Subcommittee on Public Lands,
Reserved Water and Resource Conservation
Committee on Energy and Natural Resources
United States Senate
Washington, D.C. 20510

Dear Senator Wallop:

This is in reply to your letter of November 1, 1985, regarding the management, protection, and preservation of archaeological resources. We have carefully reviewed the questions of the Subcommittee on Public Lands, Reserved Water and Resource Conservation. Our responses are enclosed.

If you need additional information on the Bureau of Land Management's cultural resource management activities, please let us know.

Sincerely,

R. F. Burford

Director

Enclosure

Section A: ARCHAEOLOGY

Question 1. How many full-time archaeologists are on the BLM payroll, and what is their distribution within the regime?

Response. As of June 1985, the BLM had 134 archaeologists engaged in the cultural resource management program, distributed in the following manner: 14 in State Offices; 50 in District Offices; 65 in Resource Area Offices; and 5 in other organizational units (headquarters and special-function offices).

Question 2. How many archaeological sites are known to exist within the system?

Response. Approximately 125,000 cultural resources have been identified on BLM-administered lands to date, of which an estimated minimum 95 percent are archaeological sites (for statistical reporting purposes we do not make a distinction among archaeological, historic, and other cultural resources).

Question 3. What is the long-term program for identifying archaeological sites within the jurisdiction of the BLM?

Response. Systematic efforts toward the identification of cultural resources are carried out as part of the preparation of the general land use plans required in Section 202 of the Federal Land Policy and Management Act. As new plans are initiated and existing plans are amended, cultural resource data needs are assessed and inventory projects are conducted. Land use plans are developed and updated according to a schedule, designed to allow all BLM lands to be covered by reasonably up-to-date plans. Thus, long-term and systematic cultural resource identification is closely linked with land use planning.

The BLM has developed a model inventory system consisting of three classes, or levels of intensity, to allow choices according to needs. Compilation and synthesis of existing cultural resource data, from published and unpublished documents, institutional site files, and other sources (Class I inventory), may be adequate identification for plans where little development and few conflicts are anticipated among land and resource uses. Where only sparse or geographically biased cultural resource data currently exist, or where land use conflicts may be greater, a sample survey (Class II inventory) in addition to the Class I inventory may be appropriate. Class III inventory, which is an intensive, full-coverage survey, is generally reserved for the project planning stage, in which general land-use decisions are refined for implementation.

Question 4. How many archaeological surveys have been completed [BLM lands]?

Response. Because size and intensity of surveys are variable, we do not compile information on number of surveys, but rather on acres inventoried. This includes the acreage of Class III inventory areas and of sample units surveyed in Class II inventories. To date, approximately 7 million BLM acres, or about 2 percent of the total, have been inventoried at the Class III level.

Question 5. Does the Washington Office set priorities in completing such inventories? How does the Washington Office assist in providing funds for archaeological surveys?

Response. In general, inventory priorities conform to the land use planning schedule. Field offices identify their funding needs for cultural resource inventories in the coming year as part of budget development. The cultural resource management subactivity funds cultural resource inventory for general land use planning, according to needs identified by the field offices. Subactivities which generate specific BLM land use projects fund cultural resource inventory related to their projects. Non-BLM land use applicants are required to fund cultural resource inventory in order to have their applications processed in a timely manner.

Question 6. How does an area manager assure that maintenance activities, visitor use, rehabilitation, and development activities do not inadvertently destroy important archaeological remains?

Response. As a matter of policy and legal/regulatory compliance, any activity that requires the Area Manager's approval is automatically the subject of cultural resource consideration. Area Managers routinely consult with their staff cultural resource specialists to determine whether survey, protection measures, special conditions, or other provisions are necessary before authorizing maintenance, development, or use. Documentation of compliance with Section 106 of the National Historic Preservation Act and 36 CFR Part 800, or of the specialist's negative findings, must be included in the case file before the activity is authorized.

Section B: ENFORCEMENT

Question 1. How are incident reports against archaeological resources reported to the Washington Office, or are they? How is this information intended to be used by the Washington Office?

Response. It should be noted that the BLM organization is field oriented, and managerial responsibility for the resource protection program has been delegated to the State Directors. Specific law enforcement operations are directed from the field, not from the headquarters office. Incidents are not reported. State Offices report investigations to the Washington Office by memorandum, for purposes of coordination, planning, budgeting, and policy oversight. Further, State Offices keep the Washington Office apprised of significant events as they occur.

Question 2. Are there efforts within the Washington Office to coordinate law enforcement efforts with other land managing agencies? Is the [agency] currently sharing any information with the other agencies? How can this cooperation benefit the resources?

Response. The Washington Office is responsible for and active in coordinating with other land management and law enforcement agencies. For example, the resource protection staff recently participated, along with archaeologists, prosecutors, and other law enforcement agencies, in a coordinating meeting convened by the National Park Service. The purpose of the meeting was to improve interagency cooperation in archaeological resource protection. The Washington Office also coordinates BLM's participation in the joint Federal, State, and local Archaeological Resources Protection Act (ARPA) task force efforts being conducted in Utah under direction of the U.S. Attorney's office. It is BLM policy to share information with other agencies, and it is our position that through cooperative efforts, participating agencies can better address archaeological resource protection issues.

In Fiscal Year 1985 the BLM had 51 law enforcement agreements with State and local law enforcement officials. These agreements provide for enforcement, by the non-Federal agencies, of State and local laws and ordinances which assist in the administration and regulation of use and occupancy of the public lands (these agreements pertain to the enforcement of all relevant laws and ordinances and are not limited to the protection of archaeological resources).

Question 3. Are law enforcement officers trained and knowledgeable about their responsibilities under the ARPA regulations?

Response. The BLM's law enforcement officers are trained and knowledgeable about their responsibilities under the ARPA regulations. In fact, it was with the assistance of one of our Special Agents that the Federal Law Enforcement Training Center in Glynco, Georgia, developed its one-week resident training program entitled, "Archaeological Resources Protection Training." The BLM requested 15 student quotas for this training during Fiscal Year 1985 and 9 for Fiscal Year 1986. Additionally, all BLM law enforcement personnel must receive 40 hours of in-service law enforcement training annually. During this training, they receive instruction relevant to their duties, including archaeological resource protection. Also, the subject, "Recent Court Decisions Affecting Law Enforcement," always an integral component of this training, has an important role in updating personnel on new developments in ARPA enforcement.

Question 4. How many ARPA prosecutions have there been in the agency? How many have been successful?

Response. The following list shows the number of persons charged with violating various Federal statutes relating to archaeological resources, and the status/disposition of the cases.

Violation	Status/Disposition
Archaeological Resources - 22 Protection Act of 1979 (16 USC 470)	Convicted - 11 Not Convicted- 1 Pending Court Action - 10
Antiquities Act - 1 (16 USC 433)	Pending court Action
Theft of Government - 4 Property (18 USC 1341)	Convicted - 4
Willful Destruction of an - 2 Archaeological or Historic Resource (43 USC 8365)	Convicted - 2

Question 5. How much money has been collected from penalties or fines under ARPA, and how many, if any, rewards have been issued?

Response. Information on the total of ARPA penalties or fines is not available. Penalties and fines collected are paid to the U.S. Treasury. To our knowledge no rewards have been issued in relation to a BLM case.

Question 6. Would you provide the committee with a breakdown of all incidents that have been recorded during the Calendar Year 1984? Do you have an adequate reporting system?

Response. We do not have a breakdown of all incidents during Calendar Year 1984. However, our records do show that during Fiscal Year 1984 the BLM initiated 50 investigations into archaeological resource violations.

We are developing a computer reporting and tracking system which will enhance reporting and should be in operation by April 1986.

Question 7. When do law enforcement officers have authority to issue tickets and make arrests?

Response. Under Section 303(c) of the Federal Land Policy and Management Act, BLM law enforcement officers may: (a) make arrests without warrant or process for a misdemeanor they have reasonable grounds to believe is being committed in their presence or view, or for a felony, if they have reasonable grounds to believe that the person to be arrested has committed or is committing such felony; (b) search without warrant or process any person, place, or conveyance according to any Federal law or rule of law; and (c) seize without warrant or process any evidentiary item as provided by Federal law.

Encl. 1-4

A Violation Notice Form (ticket or citation) has been approved by the Director of the Administrative Office of the United States Courts for use in processing misdemeanors and petty offense cases in the United States district courts. The Violation Notice is used by BLM law enforcement officers to notify a person to appear before a U.S. Magistrate or to post collateral for alleged violation of a misdemeanor or petty offense.

Question 8. There is growing concern that an inadequate number of staff in the areas is resulting in resource degradation, destruction, or loss. What are the duty priorities of managers, and how does resource protection rank in these priorities?

Response. The BLM's resource protection program includes BLM Special Agents, uniformed patrol Rangers, and law enforcement agreements with local law enforcement agencies in a comprehensive team approach to protection under both Federal regulations and State law. As mentioned earlier, the BLM is a field-oriented organization, with managerial responsibility for the law enforcement program delegated to the State Directors. The protection of the cultural and historic heritage of our Nation cannot be underestimated or undervalued. Managers in State Offices give high priority to the resolution of archaeological resource protection problems.

The complexity and difficulty in investigating antiquities violation cases and their successful conclusion in court requires a great deal of effort and expertise and consumes many hours. There is a growing trend to market artifacts in an interstate and international market. A variety of laws are being violated, including the Antiquities Act of 1906 and the Archaeological Resources Protection Act of 1979, customs laws, and theft and destruction of Government property statutes. Every effort is being made by this office to ensure that the protection of these nonrenewable cultural resources remains a high priority.

Question 9. Is the agency developing any computer capabilities to share information from area to area, agency to agency, and agency to State that relates to vandals and looters of publicly owned archaeological sites? If so, how is such a program being funded and what are the short and long range plans for it?

Response. The BLM resource protection staff is currently developing computer capabilities which will enhance reporting and sharing of information within BLM and among law enforcement agencies. The system is supported by Washington Office funds for development and implementation. The current goal is to have existing information into the system by April 1986. The long-term goal is to include also an inventory of locations where violations have occurred but for which no perpetrator has been identified. The system is being designed so that BLM law enforcement officers will have better reporting capability and ready access to information obtained by others.

Question 10. How many incidents against archaeological resources were reported in the past year? How many ARPA prosecutions were made in that period, and how many were successful?

Response. Please refer to our responses to Questions 1, 4, 6, and 9. Reports of incidents against archaeological resources are not reported to the Washington Office. Only investigations generated from the incidents are reported; information on incidents is maintained in the field offices. There are numerous cases pending in the judicial system at this time; e.g., recently an Arizona Grand Jury returned a six-count felony indictment against three individuals who were arrested in March 1985.

Section C: CURATION

NOTE: Questions 1 through 4 in this section are addressed to curation of archaeological materials collected under Government contract. Direct BLM contracting for such services is rare. Nearly all archaeological work on public lands that leads to curation of materials is done by consulting archaeologists holding BLM permits and working for prospective users of the public lands. The purpose of the work is to satisfy BLM's information needs for legal/regulatory compliance, prior to approval of a proposed land use or as an agreed-upon condition of an already authorized land use. Our responses consequently deal more with permits than with contracts.

Question 1. What follow up action is taken by the agency to make sure all artifacts collected in an excavation under contract are being properly protected?

Response. Contracts and permits both require a written statement from a properly authorized officer of an approved curatorial facility (a university, museum, or other scientific or educational institution, preferably in the State where the excavated materials originated). The statement certifies the facility's agreement to accept collections, records, data, photographs, and other documents derived from the archaeological work, and to maintain and safeguard them in permanent preservation as property of the United States Government. The facility's adequacy from physical and administrative points of view must be determined before the contract or permit is approved. It is a condition of the contract or permit that all materials will be delivered to the approved facility not later than 90 days after the final report is submitted to the BLM. Another condition is that not later than 180 days after the final report is submitted, the contractor or permittee will provide the BLM with a catalog and evaluation of all materials deposited with the curatorial facility, including the facility's accession and/or catalog numbers.

Question 2. What percentage of a contract is allocated to curation activities?

Response. This would be a highly variable figure, depending on the nature, scope, and magnitude of work undertaken, the volume and range of specimens recovered, any special storage and protection needs (e.g., treatment of perishable materials), the nature of the curatorial facility itself (e.g., large public university, small private museum), and other factors. A large contract might generate very small curation costs, or the converse might as easily be true. In many cases, the contractor or permittee represents an institution with its own curatorial capability, willing to absorb most of the curation costs, while in others the contractor or permittee must arrange and pay for curatorial services. Payment usually takes the form of a single lump sum based in large part on estimation of cubic storage space required; the facility eventually assumes the costs of maintaining collections. In any event, the costs associated with curation may usually be expected to be a small fraction of the total costs of archaeological work, a few percent.

Question 3. How many repositories, museums, etc. currently hold artifacts collected under agency contract?

Response. We can only estimate the number based on fragmentary information. Artifacts and related materials from the public lands have been placed in a variety of curatorial facilities for a century or more, beginning with the major museums in the East and extending to a wide range of facilities in most of the States by the early 1900's. Our estimate is that collections from BLM lands, gathered over the past decade, are located in approximately 40 curatorial facilities, principally in the 11 westernmost contiguous States and Alaska.

Question 4. How many contracts for archaeological activities has the agency signed since 1980? With how many contractors? How many artifacts were uncovered through these activities? Where are these artifacts currently stored?

Response. The specific information to answer these questions is not readily available to us.

During Fiscal Years 1981 and 1982, an average of 15 contract proposals was approved each year for work related to cultural resources. We have not compiled this kind of information since Fiscal Year 1982, but we believe that similar numbers would apply to the succeeding years. That is, there would be an estimated 75 contracts for Fiscal Years 1981-85. In contrast, more than 1500 permits were issued during the same period, to institutions, firms, and individuals doing similar work as consultants to private industry.

Contractors generally limit their competition for contracts to geographical areas and tasks familiar to them. We estimate that 75 contracts awarded over a 5-year period for archaeological work in the Western United States would be distributed among 50 to 60 contractors.

There is no way for us to estimate numbers of artifacts. There are three reasons for this. First, we have just recently begun uniformly requiring contractors and permittees to provide us with a catalog of materials deposited with the approved curatorial facility. Second, even given a catalog of deposited materials, numbers of artifacts could not be accurately determined. Archaeological materials are usually recovered, recorded, analyzed, and stored according to provenience. For example, all potsherds (fragments of a pottery

Encl. 1-7

vessel) excavated from a vertically and horizontally distinct unit, regardless of how many there were, would probably be cataloged under a single number. Third, each potsherd might be considered "an artifact," but in terms of the human behavior represented by the remains, it is each of the original vessels --now in fragments--that is important, not the count of fragments (a single broken vessel may be in 2 pieces or 2,000).

As mentioned in the response to Question 3, we estimate that archaeological collections made in recent years are housed in approximately 40 curatorial facilities in the 11 westernmost States and Alaska.

Question 5. How often does the agency inventory these artifacts?

Response. We would not normally attempt to do this unless there were some indication of a problem. We generally inquire of the repository whether a contractor delivered the materials on time and in the agreed-upon manner before making final payment on the contract.

Question 6. How is the information on these collections provided to the professional community?

Response. Reports of work conducted under contracts and permits are always required. We also require information on the location of recovered materials to be included in the reports. Most descriptive reports are published by the contractor/permittee as part of a research series readily available to regional and topical specialists. Significant results of broader interest are usually published in professional journals with wider circulation. In some cases, BLM publishes a report itself to assure wide distribution.

Question 7. Are there regulations governing the issue of curation in the agency?

Question 8. Are these regulations consistent with other agencies?

Response. The following responds to both Questions 7 and 8. At the present time there are no regulations governing the curation of Federal archaeological collections in detail. The governmentwide uniform regulations for the Antiquities Act of 1906 (43 CFR Part 3) and for the Archaeological Resources Protection Act (43 CFR Part 7) provide generally for curation in qualified facilities when Federal permits are involved.

ADDITIONAL INFORMATION:

The BLM has two curatorial facilities of its own. The multi-functional Anasazi Heritage Center in southwestern Colorado houses collections from BLM lands in the four-corners area. A smaller facility in Billings houses collections from BLM lands in Montana.

Please advise us if there are questions that are not answered to your full satisfaction.

Encl. 1-8

United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

IN REPLY REFER TO
L58(180)

PM 2

Honorable Malcolm Wallop
Chairman, Subcommittee on Public Lands,
Reserved Water, and Resource Conservation
Committee on Energy and Natural Resources
United States Senate
Washington, D.C. 20510

Dear Senator Wallop:

Enclosed in response to your request of November 1 are our responses to the additional questions submitted by Senator Bingaman following the Subcommittee hearing in Albuquerque, New Mexico, on archeological resource protection.

We appreciate the opportunity to supplement our testimony.

Sincerely,

Acting Denis P. Galvin
Director

Enclosures

A. ARCHAEOLOGY

1. How many full-time archaeologists are on the NPS payroll, and what is their distribution within the System?

A. There are 84 full-time permanent archeologists in the National Park Service. These employees are distributed as follows:

Internal Regional Office Programs	40
External Regional Programs	15
WASO: Internal	2
External	5
Denver Service Center	12
Parks	10
Total	84

2 How many archeological sites are known to exist within the System in the southwest region?

A. There are currently 8,618 archeological sites known to exist within the Southwest Region, National Park Service.

3. What is the long-term program for identifying archeological sites within the jurisdiction of the NPS?

A. Archeological inventory and field survey projects are being programmed for each park needing a survey. The needs are being identified in park General Management Plans, including park-specific cultural resources management plans. Additionally, surveys are done as part of project construction planning for developments within the parks. Implementation of archeological site identification projects is contingent upon receipt of program funding.

4. How many parks have completed adequate archeological surveys?

A. It is estimated that 115 units of the National Park System have completed adequate archeological surveys. (The National Capital Region is not included in this statistic.)

The completed surveys are park basic archeological inventories and do not include continuing, more intensive surveys done for proposed park construction or development project planning and compliance purposes. In addition, assessment projects to evaluate known sites for listing on the National Register of Historic Places are continuing.

5. Besides the Cultural Resources Preservation Fund, under what other budget program are surveys funded?

A. Surveys are accomplished with operational base funds and monies acquired for specific construction project environmental planning and compliance, as available.

6. How does a park manager assure that maintenance activities, visitor use, rehabilitations, and development activities do not inadvertently destroy important archeological remains?

A. The National Park Service's "Cultural Resources Management Guideline (NPS-28)" and "Management Policies" require that archeological inventories be done to guide planning, development and maintenance activities. The requirements are part of overall compliance procedures mandated by the National Historic Preservation Act, as amended. National Park Service archeological specialists, together with park staffs, track all ground disturbing projects that might inadvertently destroy archeological remains and take appropriate actions to identify and protect archeological resources. Archeological clearances are required for all ground disturbing projects.

7. Have basic surveys for archeological resources been completed for all of the parks in the SW Region? By what method are you proceeding to acquire these data?

A. No. Archeological surveys have been programmed for all parks needing an inventory. The surveys will be implemented as funding is acquired. These studies are primarily funded from the limited Cultural Resources Preservation Program fund which also funds preservation of structures and collections.

8. Does the Washington office set priorities for your office in completing such inventories? How does the Washington office assist the region in providing funds for archeological surveys? How does your office influence the priorities of the parks within the SW Region to prepare resource inventories?

A. The Washington office reviews regional inventory priorities and justifications but does not set priorities. The Washington office allots funding for projects based on established criteria and by comparing project lists and justifications from region to region. Regional offices consider park priorities with the needs of the entire region in mind.

B. ENFORCEMENT

1. How are incident reports against archaeological resources reported to the Washington office, or are they? How is this information intended to be used by the Washington office?

A. All incident offenses are reported to Ranger Activities in Washington, D.C., on the annual law enforcement statistical report ("National Park Service Enforcement Activity Report"). This data is used by the Washington office to track incident offense trends and to make program recommendations for solving enforcement problems nationwide.

2. Are there efforts within the Washington office to coordinate law enforcement efforts with other land managing agencies? Is the Service currently sharing any information with the other agencies? How can this cooperation benefit the resources?

A. The Service regularly maintains a liaison between all State and Federal agencies to coordinate law enforcement efforts, including several cases involving Archaeological Resources Protection Act violations. Law enforcement units of other agencies share criminal intelligence with the Service. This is the kind of cooperation that puts ARPA violators on notice that the Federal Government is working as a team to protect cultural resources.

3. Are law enforcement officers trained and knowledgeable about their responsibilities under the ARPA regulations?

A. Service law enforcement officers, particularly officers in cultural park units, regularly receive instructional memoranda and participate in seminars, workshops and other formal training about their responsibilities under the Archaeological Resources Protection Act. The training program is ongoing, and officers who have not yet had formal training should be scheduled to receive it in the future.

4. How many ARPA prosecutions have there been in the Service? How many have been successful?

A. As yet, only one reported case has been prosecuted, and successfully, by the National Park Service under the ARPA 1979. The limited experience of the last year and a half suggests that violators of the Act can be and are being successfully prosecuted. As we gain more experience with the Act, and agencies pursue violators vigorously, the track record will improve and we will see beneficial results for the resources we are trying to protect.

5. How much money has been collected from penalties or fines under ARPA, and how many, if any, rewards have been issued?

A. To date, no money has been collected from penalties or fines under ARPA, and no rewards have been issued.

6. Would you provide the committee with a breakdown of all incidents that have been recorded during the calendar year 1984? Do you have an adequate reporting system?

A. We have not yet been able to accumulate accurate data on these types of incidents and their frequency. The National Park Service's automated investigative and archeological data bases will, in the next couple of years, begin to accumulate this type of information. Given the extent of the problem, the acreages and number of properties involved, and the remoteness and isolation of many archeological properties, it appears unlikely that we will be able to accumulate complete and accurate data in the near future.

7. When do law enforcement officers have authority to issue tickets and make arrests?

A. National Park Service law enforcement officers can issue a citation based upon a violation of National Park Service regulations committed in their presence. They can also make an arrest for any felony under the laws of the United States if there are reasonable grounds to believe that a person has committed, or is committing, a felony; and provided that such arrests occur in a National Park System unit, or, if outside of a unit, a person to be arrested is fleeing the unit to avoid arrest.

8. Is the Service developing any computer capabilities to share information from park to park, agency to agency, and agency to State that relates to vandals and looters of publically owned archeological sites? If so, how is such a program being funded and what are the short and long range plans for it?

A. The Service currently has no Servicewide computer capabilities of this type, although some regions are in the process of obtaining terminals to use the existing computer informational networks of other law enforcement agencies. Successful law enforcement efforts depend upon interagency cooperation involving not only Federal agencies but State and local personnel as well. Many administrative problems need to be resolved for this process to work well. However, the National Park Service, in cooperation with the Forest Service, is initiating the development of an automated data base for investigative purposes. The data base will be a criminal information reporting system that will include data on a range of enforcement issues including ARPA violations, suspects, violation trends, and the buying and selling of artifacts obtained illegally, among others. Eventually, other agencies will be invited to participate in sharing information that will help us all enforce the Act. The initiative between the National Park Service and the Forest Service is funded with operating base monies. In addition, the Servicewide procurement for vendors to supply computer equipment and software for the entire system should go a long way to facilitate the Service's ability to deal with data tracking for resources management and law enforcement.

9. What methods of public education are being used in your region to inform the public about the need to protect archeological resources?

A. The public is generally informed about the need to protect archeological resources through the use of brochures, signs, interpretive programs, and through personal contacts with park rangers and interpreters.

10. How many incidents against archeological resources were reported in the past year? How many ARPA prosecutions were made in that period, and how many were successful?

A. There are 196 incidents against archeological resources currently in the files of the Southwest Region.

One successful ARPA prosecution is reported for an incident at Richmond National Battlefield Park in the Mid-Atlantic Region. Other incidents have occurred but they have been dealt with as violations of specific National Park Service regulations.

Additional information on general archeological incidents, and potential cases under the ARPA is not yet available Servicewide.

11. How many incidents against resources were reported during 1984 within the entire SW Region? Are all incidents reported to a central location at the regional headquarters? Please provide a list of resource incidents.

A. 1) Incidents reported against resources in the Southwest Region:

Regionwide: 3,467

2) All incidents are reported to the SWR Office, Attention, Law Enforcement Specialist, who forwards specific cases to other concerned specialists (i.e., Natural or Cultural Resource Specialist).

3) Resource Incidents: Southwest Region

		No. cases
Cultural:	Disturbance or Destruction:	149
	Vandalism:	28
	Possession:	11
	Entering Closed Area:	8
Natural:	Disturbance or Destruction:	2,038
	Vandalism:	271
	Entering Closed Area:	10
	Off Road Vehicles:	204
	Hunting and Wildlife Violations:	119
	Fishing Violations:	27
	Fires: Illegal and set:	59
	Livestock Trespass:	260
	Sanitation/Dumping/Pollution:	190
	Smoking in caves:	87
	Illegal Construction/ Residing on Federal Land:	4
	Illegal Road Construction:	1
	Illegal Oil Well Drilling:	1

C. CURATION:

1. How many curators, museum aids, technicians, and specialists are on the NPS payroll in the Southwest Region, how are they distributed within the System, and what are their grade levels?

A. Museum Curators (4) are at

Hubbell Trading Post NHS	GS-11
Fort Smith NHS	GS-07
Bandelier NM	GS-09
Southwest Regional Office	GS-12

Museum Aid (1) is at

Hubbell Trading Post NHS	GS-03

Museum Aid/Technician (1) is at

Hubbell Trading Post NHS	GS-05

Museum Technicians (2) are at	
Fort Davis NHS	GS-05
Southwest Regional Office	GS-05
Museum Specialist (1) is at	
Lyndon B. Johnson NHS	GS-09

2. How many repositories are in the southwest System?

A. Each park in the Southwest Region with a museum collection (32) has a collection storage area. In addition, collections from Chaco Culture NHP are stored in the NPS Southwest Cultural Resources Center repository in Albuquerque. The Southwest Region has recently entered into an agreement with the Western Region to use the Western Archeological and Conservation Center in Tucson for storage and curation of collections from parks that are unable to provide adequate care.

3. What is the current estimated number of objects held by the agency in the Southwest Region, what is their combined estimated value, and what is their breakdown by discipline, i.e., natural history, archeological, etc.?

A. Estimated number of objects as of December 31, 1983:

Archeology	6,155,000
Ethnology	5,000
History	40,000
Natural History	9,000
	6,209,000

These figures will be updated as of December 31, 1985.

A. In 1983, those cataloged objects, which were valued at over $100 or identified as especially vulnerable to theft, were estimated to be $7.9 million.

The total value of these collections has not been estimated. Keeping current values on such a large number of objects is not practical. The Washington Office is currently developing an appraisal procedure that will allow estimation of the total value of a collection based on a sample. This procedure has been tested at Maggie L. Walker NHS and is to be refined and tested at two additional sites this year. Estimating the value of systematic archeological collections, which represent the bulk of the Southwest Region's collections, is problematical, because their primary worth is the scientific information they contain, which cannot be assigned a dollar value using accepted appraisal procedures. Because of their intrinsic scientific value, NPS policy prohibits the sale of systematic archeological collections. Without a history of sales, the establishment of a fair market value is difficult. When a value is needed for such systematic collections, it is sometimes based on the cost of the research that resulted in the removal of the artifacts from the site.

4. What is the backlog of uncataloged objects, and how long will it take to complete the task?

A. The backlog of uncataloged objects in the Southwest Region, as of December 1983, was 6,137,000, with 6,101,000 being archeological. The Washington Office is currently organizing a call for all regions to estimate the time required to catalog the backlog. These figures will be available later in FY 86.

5. How will the revised cataloging system speed up the process?

A. With the revised system, recording objects is accomplished in 3 steps: 1) accessioning, 2) cataloging to registration data level, and 3) cataloging to catalog data level. In order to establish minimal accountability as quickly as possible, parks may choose to first complete the 10 data elements in registration data and later complete the more detailed catalog data. A computerized cataloging system, which is currently being tested in 12 parks, will reduce catalog card typing time and greatly facilitate retrieval of cards, data and objects, for exhibition, research, periodic inventory and other uses.

6. Could the time be reduced by hiring additional personnel? By additional contracting of jobs? By a higher priority at the park level?

A. The target date for completion of cataloging can be moved up with the addition of personnel, contracting and assigning the task a higher priority at the park level.

7. When will the program for computerizing the National Catalog be implemented?

A. The Curatorial Services Branch is currently testing one software program, dBase III, and about to initiate testing for a second software program, Oracle. Following evaluation of the test results and completion of the necessary revisions, the program is expected to be implemented in spring 1986. The selected software program will be used on an interim basis until the Servicewide computer procurement, which involves all operations of the National Park System, is made.

8. What are the standards for museum storage in the NPS? Which parks have adequate storage for objects? Which parks do not? Should each park provide adequate storage for objects on site? Are regional or central repositories the recommended alternative to on-site storage for some units?

A. The standards for museum storage are detailed in the Museum Handbook, Part I, which is currently being updated and revised. The revisions are expected to be issued to the field early in FY 87. In the interim, we expect to issue, in December 1985, a special directive summarizing storage standards and asking parks to assess their storage conditions, identify deficiencies, and program for their correction. Assessments are to be completed by September 30, 1986.

The decision of whether to store museum collections on site or at a central repository must be made by each site manager in consultation with the regional curator and other discipline specialists in the regional office and locally. Regional or central repositories are an excellent alternative to on-site storage. An agreement for storage and curation at a non-NPS repository, e.g. a university, is also a viable alternative. The National Park Service operates several repositories that provide this service to parks (Western Archeological and Conservation Center, Midwest Archeological Center, Southeast Archeological Center, Southwest Cultural Resources Center, Southeast Cultural Resources Preservation Center, National Capital Museum and Archeological Regional Storage Facility).

9. Which parks need Collection Management Plans, and how can the process for completing these plans be accelerated?

A. Servicewide, 43 parks have Collection Management Plans, an additional 34 have plans in progress. NPS guidelines (NPS-28) require all parks with museum collections to have this plan, leaving approximately 225 plans to be completed. The plans will vary in size depending on the extent and complexity of the collection. Most of these plans are coordinated by the Curatorial Services Branch staff in the Washington Office; some are coordinated by regional offices. The program can be accelerated by increasing capability in the Washington and regional offices. A program to train regional and field staff in producing. Collection Management Plans have been proposed, but lacks staffing for initial implementation and staffing and funding for full implementation.

10. How could the NPS improve outdated exhibits by making more objects available for visitor viewing and at the same time ensure that display facilities can provide long-term protection and preservation for the objects?

A. Changing permanent and temporary exhibits frequently, to rotate objects available to the visitor is ideal both for the visitor, and for preserving the objects. Currently, permanent exhibits are changed approximately every 20 years. (Every 10 years would be ideal.)

To insure that display facilities provide long-term protection and preservation, preservation specifications need to be detailed in contracts; NPS exhibit specialists, planners, and conservators need to be well-versed in such preservation techniques; and exhibit designs need to be carefully reviewed by the park, the regional curator and other discipline specialists, conservators at Harpers Ferry Center, and the Washington Office. Established NPS procedures call for such expertise and review.

11. What efforts are currently underway to correct the problems of the past and bring collections management throughout the System up to acceptable standards?

A. The following list highlights those actions that have been taken to improve the management of collections in the System:

Administration and Policy

1. Appointment of a Chief Curator in the Washington Office (1980).

2. Increase in funding for collections management (cataloging, storage planning and improvement, and conservation treatment) through the Cultural Resources Preservation Fund from near zero (FY 80) to $1,205,800 (FY 85).

3. Revision of Museum Handbook, Part I, on collection storage and preservation (to be issued FY 87) and Part III on exhibits and furnishings (to be issued in FY 88).

4. Review of park planning documents by the Chief Curator.

5. Preparation of a draft amendment to the Museum Act of 1955 to facilitate disposal of excess museum objects. (Proposed amendment approved by Department, in OMB for review.)

6. Accreditation of Independence NHP and review of Servicewide programs by the American Association of Museums (1985).

7. Establishment of a Natural History Collections Committee to promote higher profile for natural history collections in the Service (FY 85).

8. Promoted the establishment, through the American Association of Museums, of an Ad hoc Committee on Park Museums and Historic Sites, to increase profile of park museums within the museum profession.

Planning

1. Completion of Scope of Collection Statements for each park (by December 31, 1985).

2. Identification and use of two new planning documents, Collection Storage Plan and Collection Condition Survey. Increased emphasis on Collection Management Plans for parks.

3. Establishment of 5 year Servicewide curatorial planning strategy.

Accountability

1. Issuance of revised Museum Handbook, Part II, including revised and streamlined cataloging system (1984).

2. Development and implementation of an annual Collection Management Report that gives the status on cataloging and use of collections in each park, region, and Servicewide.

3. Development of computerized cataloging system.

4. Call for parks and regions to establish target dates for completion of cataloging backlog (FY 86).

5. Revisions to annual physical inventory system (FY 86).

6. Developing procedure to estimate the total value of a collection from an appraised sample (FY 85-86).

Storage

1. Special Directive on museum collection storage asking parks to identify and program for correction of storage deficiencies (FY 86).

2. Increase in technical storage information and specialized museum supplies provided to parks.

Training

1. Expansion of curatorial training with increase of Servicewide courses, regional and outreach courses and on-job-training, e.g. each region offered 1 or more courses introducing the changes in the cataloging system. Proposed expanded training program in collection management planning to increase production of these plans.

2. Improvement in technical publications directed toward the field, including revision to Conserve 0 Grams (state-of-the-art technical leaflets focusing on preservation).

United States
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Agriculture

Forest
Service

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Reply to: 1510

Date: JAN 31 198[illegible]

Honorable Malcolm Wallop
Chairman, Subcommittee on Public Lands,
  Reserved Water and Resource Conservation
Committee on Energy and Natural Resources
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

As requested, enclosed is our response to questions raised as followup to the oversight hearing held in Albuquerque, New Mexico, concerning our cultural resource program.

We would be happy to respond to other questions that may arise or further discuss our cultural resource program with the Committee.

Sincerely,

R. MAX PETERSON
Chief

Enclosure

USDA - FOREST SERVICE

Cultural Resource Program

ARCHEOLOGY

1. How many full-time archeologists are on the FS payroll, and what is their distribution within the regime?

Nationally, there are approximately 130 full-time archeologists employed by the Forest Service. This includes one archeologist in our Washington Office and at least one in each of our nine Regional Offices. The remaining archeologists are stationed on National Forests throughout the System. We also have a significant number of part-time and temporary archeologists employed at any given time, particularly during the field season. "Paraprofessionals", other Forest Service employees who have been trained to assist Forest archeologists in basic inventory work in addition to their other responsibilities, are also used. A chart is attached which shows the distribution of cultural resource specialists within the Forest Service system. These numbers come from 1984 data and are likely to be higher than at present.

2. How many archeological sites are known to exist within the System?

Approximately 100,000 cultural resource sites have been inventoried Service-wide, most of which are prehistoric or historic archeological sites (as opposed to buildings, bridges, etc.). This is undoubtedly a small percentage of the total number of sites that exist within the National Forest System. Approximately 10,000 new cultural properties are identified each year.

3. What is the long-term program for identifying archeological sites within the jurisdiction of the FS?

It is our objective to complete an inventory of cultural resources for all National Forest System lands. Priority is given to those areas where undertakings are proposed. Additional inventory is undertaken for special projects and for other areas as funding levels allow. We are also in the process of completing cultural resource overviews of our National Forests to compile site data and to synthesize what is currently known about the prehistory and history of Forest areas. Service-wide we have completed field surveys on approximately 10 % of NFS lands.

4. How many archeological surveys have been completed in this region ?

The Forest Service conducts approximately 6,000 individual archeological surveys each year, mostly small surveys in advance of proposed projects such as timber sales, land exchanges, road construction, etc.

5. Does the Washington Office set priorities for your office in completing such inventories? How does the Washington Office assist the region in providing funds for archeological surveys?

No, not directly. Cultural resource surveys and evaluations in advance of projects are required. General standards are provided by the Washington Office in manual directives, and general priorities are identified in budget direction based upon targets in other areas. The major thrust of our cultural resources program is to locate and protect cultural resources; that is, our dollars are spent to ensure that the multiple resource orientation of the Forests can proceed without inadvertent damage to cultural resources. The Washington Office distributes funds appropriated by Congress to the Regions based upon the relative size of their Cultural Resource Management Programs. Each Region determines what portion of that to apply to archeological surveys.

6. How does a forest ranger assure that maintenance activities, visitor use, rehabilitations, and development activities do not inadvertently destroy important archeological remains?

Projects sponsored by the Forest Service, such as maintenance of a facility or development or rehabilitation of a campground, are considered to be "undertakings" within the meaning of the Advisory Council's regulations. Surveys are performed as needed in advance of such projects. It is not possible to monitor the activities of all visitors to National Forests due to the size of the lands involved. We do post signs at significant sites, if they are obvious, and supply visitor information concerning cultural resource protection at District and Forest Supervisor's offices.

ENFORCEMENT

1. How are incident reports against archeological resources reported to the Washington Office, or are they? How is this information intended to be used by the Washington Office?

When an arrest or indictment is obtained in a Region, this information is passed on to the Washington Office via telephone. The information is used to alert other Regions to activity and to threats to the cultural resource, and to assist the chief somewhat in determining budget priorities. However, this is not critically needed information at the national level.

2. Are there efforts within the Washington Office to coordinate law enforcement efforts with other land managing agencies? Is the Service currently sharing any information with the other agencies? How can this cooperation benefit the resources?

Yes, efforts are made to coordinate with other agencies. For example, in one State, Forest Service employees are designated as Deputy U.S. Marshals so that they can take action against archeological theft on lands managed by the Department of Interior as well as on those managed by the Forest Service. The Southwestern Region and the Washington Office have been instrumental in assisting the Federal Law Enforcement Training Center (FLETC) with advice and instructors for the ARPA training courses that FLETC puts on.

3. Are law enforcement officers trained and knowledgeable about their responsibilities under the ARPA regulations?

Many officers have received specialized training in distinct techniques to protect sites and to increase the effectiveness of their investigations. This National training is conducted on an interagency basis and includes law enforcement specialists as well as archeologists and prosecuting attorneys.

4. How many ARPA prosecutions have there been in the Service? How many have been successful?

Nationally, during the period of 1983 through 1985, there have been about 65 prosecutions of individuals under archeological protection laws. Since ARPA became law, there have been 31 prosecutions and 19 convictions.

5. How much money has been collected from penalties or fines under ARPA, and how many, if any, rewards have been issued?

Nationally, $14,800 has been collected from fines, $411,000 have been billed to violators under ARPA civil penalties, and $500 has been paid in rewards.

6. Would you provide the committee with a breakdown of all incidents that have been recorded during the calendar year 1984? Do you have an adequate reporting system?

Illegal excavation near Chimney Rock, Colorado, 2 cases.
Jan. 5 seized olla worth $24,000 in Lyon case.
Jan. 25 Illegal digging north of Globe, AZ.
Feb. 4 Report of sale of illegally obtained artifacts.
Feb. 8 Illegal sale of artifacts in Showlow.
Feb. 15 Report of digging in Tonto Basin, AZ.
Feb. 18 Report of sale of artifacts in Tucson.
Feb. 26 Apprehended suspect while digging in Tonto Basin
Mar. 3 Report of sale of artifacts in Phoenix.
May 3 Report of digging near Heber, AZ.
May 5 Report of digging near Winona, AZ.
May 9 Report of digging near Ramah, NM.
Jun. 1 seized stolen baskets in Region 4 case.
Jun. 9 Report of digging in Bloody Basin, AZ.
Jun. 18 Report of digging near Canyon Creek, AZ.
Jun. 28 Report of digging near Apache Reservation.
Jun. 29 Report of illegal sale in Showlow, AZ.
Jul. 5 Report of illegal sale in Cottonwood, AZ.
Aug. 8 Report of digging near Flagstaff, AZ.
Sep. 11 Report of digging near Winona, AZ.
Oct. 12 Report of illegal sale in Sedona, AZ.
Nov. 6 Report of digging near Showlow, AZ.
Nov. 15 Report of digging near Heber, AZ.
Dec. 3 Report of digging near Payson, AZ.
May - Report of theft of collection of baskets Blanding, UT.
Jun.- 120 incidents of illegal digging reported near Blanding, UT.

Defendant found guilty of ARPA violation, sentence pending.
Defendant pled guilty to ARPA violation, sentenced.

At the present time there is no reporting system specifically for incidents of cultural resource theft. Since the information is not critical at the national level, periodic reporting has served our needs.

7. When do law enforcement officers have the authority to issue tickets and make arrests?

Forest Service Officers have authority to make arrests for felonies committed in their presence or when ordered to do so by the court. They have authority to issue tickets when they observe a violation of the Code of Federal Regulations or when another person observes a violation and reports it to them and is willing to testify in Court, if necessary.

Law enforcement officers can issue tickets if they (through archeologists) determine that the resource damage was minimal and does not reach the $5,000 limit required under ARPA. Arrests can be made if the officers feel that the violator will flee or cause further destruction to sites.

8. There is a growing concern that an inadequate number of staff in the areas is resulting in resource degradation, destruction, or loss. What are the duty priorities of rangers and how does resource protection rank in these priorities?

The priority of cultural resource protection in the duties of rangers and other personnel varies with the particular circumstance. Some Regions, where cultural resource values are high and where illegal activities are frequent, rank cultural resource protection as the number 1 priority. In these instances, an active program of protection is carried out with site monitoring, law enforcement patrols, and investigation of incidents of illegal activity. In other locations, the protection of cultural resources is a more reactive process with response to individual cases. In general we could characterize cultural resource protection from illegal activities as being only moderately successful. Our efforts have increased significantly over the last decade and current statutes provide a much greater deterrent to vandalism that those available 10 years ago. The size of the problem, however, remains large and our resources, both staff and funding, are seriously taxed to cope with it.

9. Is the agency developing any computer capabilities to share information from park to park, agency to agency, and agency to State that relates to vandals and looters of publically owned archeological sites? If so, how is such a program being funded and what are the short and long range plans for it?

The Forest Service and the National Park Service have entered into an Interagency Agreement to develop and install an on-line computerized system to gather and share such information. A contract has been issued and the system should be operational by early 1986. The operation is funded through appropriations to both agencies. The long range plans are for every field office of both agencies to have the capability to share information and intelligence. This system will by accessible through the FLIPS computer system now implemented in the Forest Service.

10. How many incidents against archeological resources were reported in the last year? How many ARPA prosecutions were made in that period and how many were successful?

See answer to question 4 above.

CURATION

The Forest Service approaches the management of cultural resources with a conservation ethic. Sites are protected in place where ever possible. Only when no other feasible or prudent alternative is available is a site excavated and the materials and information extracted. This approach keeps collections management at a minimal level and has resulted in few problems for the agency at this time. When a site must be removed to allow a project to proceed or to protect the information from imminent destruction, the work is generally carried out by contract to established educational and research institutions with properly managed collections facilities. The responses to the following questions about curation should be viewed in light of this management approach.

1. What follow up action is taken by the agency to make sure all artifacts collected in an excavation under contract are being properly protected?

All contracts have a professional archeologist as Contracting Officer's Representative. Contract specifications include stipulations regarding analysis and curation of artifacts. The COR is required to make periodic checks to assure artifacts are collected and protected.

2. What percentage of a contract is allocated to curation activities?

This varies from contract to contract depending on the amount of artifacts collected or anticipated to be collected but probably averages about 10% of the contract amount.

3. How many repositories, museums, etc. currently hold artifacts collected under agency contract?

Eight separate museums are reported to hold artifacts in the three Regions (R1, R4, R8) that have provided such figures.

4. How may contracts for archeological activities has the agency signed since 1980? With how many contractors? How many artifacts were uncovered through these activities? Where are these artifacts currently stored?

Contracts	Contractors	Artifacts	
17	13	Unknown	(R8)
0	0	None	(R1)
1	1	1,500	(R4)

A great many of the items collected from Forest Service projects include non-diagnostic stone flakes and pieces of pottery with little intrinsic value. Although the numbers of these items collected are known and published in reports, most Regions have not made the effort to keep running totals of such items. The effort would be of relative little value given the nondescript nature of many of these artifacts.

5. How often does the agency inventory these artifacts?

The frequency at which previously collected artifacts are inventoried varies from region to region. In general it occurs infrequently or at a schedule developed by the institution housing the collection. Institutions approved to curate collections are expected to do so in accordance with appropriate levels of security and protection.

6. How is the information on these collections provided to the professional community?

Information of collections is provided to the professional community through the publication and distribution of field and research reports.

7. Are there regulations governing the issue of curation in the agency?

Forest Service Manual chapter 2361.29b addresses curation of collections from National Forest System lands.

8. Are these regulations consistent with other agencies?

In general, yes.

APPENDIX II

Additional Material Submitted for the Record

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Telephone
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October 15, 1985

Subcommittee on Public Lands
Reserved Water and Resource Conservation
502 Hart Senate Office Building
Washington, D.C. 20510

RE: Oversight Hearing - Archeological Protection
(Albuquerque, NM, October 14, 1985)

Dear Sirs:

Having attended the subject hearing, I came away with the feeling that (1) significant problems remain in protecting society's historic sites, but (2) the Subcommittee was presented with few specific legislative solutions by the witnesses, although the witnesses did pinpoint some troublesome areas in the administration of current laws. I recall also that several witnesses testified that it was not the unsanctioned looting which constituted the major threat to archeological resources, but the permitting of activities by federal agencies (acting without proper resource planning and archeological inventorying) which poses the greatest danger.

My principal interest is in New Mexico, where I live and where my clients reside. I would therefore offer one concrete proposal for legislation which would add significant protection to archeological sites in the uniquely important San Juan Basin.

Section 522(e)(3) of SMCRA now prohibits coal surface mining where such activities would:

> . . . adversely affect any publicly owned park or places included in the National Register of Historic Sites unless approved jointly by the regulatory authority and the Federal, State, or local agency with jurisdiction over the park or the historic site.

In the initial surface mining regulations, OSM took the position that § 522(e)(3) should be construed to protect significant archeological sites, whether listed on the Historic Register or not.(1) I believe that this construction of SMCRA was proper as a matter of policy, for four related reasons. First, the question of whether sites are listed or not is unrelated to the scientific value of the site, in general. Many eligible, but unlisted, sites are expected to contain archeological information superior to listed sites, which are often more spectacular visually. Second, Congress surely wanted to protect real values, not to perpetuate mere distinctions of classification. Third, despite the mandate of E.O. 11593--described by counsel to the ACHP as a continuing duty --federal land managers at the time of SMCRA's enactment had barely begun the inventorying of and nomination processes for archeological sites on federal lands. This is especially true for BLM in New Mexico. Thus, the fact that hundreds of sites in New Mexico are not now listed on the Register is unrelated to the scientific worth of the sites. And fourth, Congress could not have intended that, by explicitly referring only to listed sites in § 522(e)(3), the protections of NHPA would be lessened--but this is what has happended under SMCRA during the past five years.

One of the initial changes in the surface mining regulations by Secretary Watt was to delete unsuitability protections for sites eligible for inclusion in the Register, regardless of the scientific or cultural merit of the eligible sites.(2) Since that time--perhaps because Secretary Watt viewed the disposal of federal coal as a principal goal--no sites in the San Juan Basin in areas of coal interest have been nominated for the Register, although a recent 10% sample survey of PRLA tracts found 171 "known sites" and between 1,012 and 1,492 "predicted sites."(3)

Thus, leasing for coal surface mining is now intended to precede not only nominations of eligible sites to the Register, but even the complete inventorying of the proposed lease areas to determine if important eligible sites exist. As OTA has found, the deferral of consideration of archeological matters (assuming that these matters are considered at all) "detracts from the predictability and effectiveness of the tiered structure concept of data and analysis,"(4) increasing the risk that environmentally sensitive areas would be leased and mined without adequate consideration of competing values.(5) This, it seems to me, is plainly at odds with both the purpose of SMCRA and with Congress' desire in FLPMA to have long-range, comprehensive planning--not "issued-forced" actions.

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(1) See, 44 Fed. Reg. 14904 and 15343 (March 13, 1979).

(2) See, 47 Fed. Reg. 25284 (June 10, 1982) (proposed), 30 C.F.R. § 761.11(c) (1984 ed.).

(3) Second Draft San Juan River Regional Coal Environmental Impact Statement, p. 3-34. Appendix A-6 shows the status of earlier efforts. Of 501 "predicted sites," ninety have been inventoried and found to be eligible for the Register and 22 nominations are pending.

Under the existing regulations, several hundred potentially significant sites will play no part in pre-leasing decisions by BLM. The solution is to amend § 522(e)(3) so that the intent of NHPA and SMCRA--to protect archeologically valuable sites--is realized. This would be accomplished by adding the following underlined phrase to § 522(e)(3):

> (3) which will adversely affect any publicly owned park or places eligible for or included in the National Register of Historic Sites unless approved jointly by the regulatory authority and the Federal, State, or local agency with jurisdiction over the park or the historic site;

If the suggested change were made, the incentive of BLM to avoid nominating eligible sites would be eliminated, the pre-lease planning process would include all relevant historical data, and the risk of sanctioned destruction of important sites would be significantly lessened. Leasing of lands with eligible sites could still take place if approved jointly by the responsible agencies.

Thank you for your consideration.

Very truly yours,

Paul E. Frye

xc: Hon. Pete V. Domenici
• Hon. Jeff Bingaman

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(4) Environmental Protection in the Federal Coal Leasing Program, OTA (May, 1984), at 106. See generally, id., at 11-19. Archeological protection in the San Juan Basin was specifically discussed. Id., at 107-108.

(5) Id., at 12.

United States Department of the Interior
OFFICE OF THE SOLICITOR
WASHINGTON, D.C. 20240

JUN 5 1973

IN REPLY REFER TO:

Memorandum

To: Executive Secretary, Advisory Council on Historic Preservation

From: Legal Counsel

Subject: Executive Order 11593

This is in response to your memorandum of May 9, 1973, requesting our opinion with regard to the continued effectiveness of those portions of Executive Order 11593, "Protection and Enhancement of the Cultural Environment", that delineate the responsibilities of Federal agencies concerning nomination of properties to the National Register and that establish July 1, 1973, as a completion date. You have also asked whether the other provisions of the Executive Order continue in effect until revoked.

As your memorandum points out, section 2(a) of the Executive Order requires Federal agencies to locate, inventory, and nominate to the National Register all properties under their jurisdiction or control that meet National Register criteria. The section also requires that this process be completed no later than July 1, 1973. You asked whether the Council's interpretation, that this deadline does not terminate the Federal agency responsibilities under section 2(a) but rather that those responsibilities, and the interim cautionary period prescribed by section 2(b), continue in effect until the Federal agency has fulfilled them, is legally sound. In our opinion, this interpretation is correct.

As a basic principle, an Executive Order promulgated by the President pursuant to the authority delegated to him (or his subordinates) by Congress, has the effect of a statute and is a part of the law of the land. Givens v. Zerbst, 255 U.S. 11, 19 (1920); Wood v. Beach, 156 U.S. 548 (1894). It is well established that failure to meet a completion date required by law in a situation such as the one at hand, where the law does not create a privilege, impose a penalty, or restrain the doing of the act after the time specified, does not waive the duty to comply with that law but rather underscores the

the duty to fulfill that legal obligation as quickly as possible. Diamond Match Company v. United States, 181 F. Supp. 952 (Cust. Ct. 1960.)

It is also well established that in a situation where an Executive Order has no specified termination date the order remains in effect until revoked. See, e.g., 40 Op. Att. Gen. 207; 78 I.D. 269; See generally, District of Columbia v. Thompson Co., 346 U.S. 100 (1952).

Bernard R Meyer

Bernard R. Meyer

Daniel B. Hurley
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1-505-268-3625

October 25, 1985

Senator Pete V. Domenici
Federal Office Building
Albuquerque, N.M. 87102

Dear Senator:

Luckily I got back from Colorado in time to attend the Subcommittee on Public Lands' hearing on October 14, 1985 but not in time to submit comments. Belatedly enclosed are my comments which I hope are pertinent.

Yours truly,

Daniel B. Hurley

Daniel B. Hurley
Consulting Geologist R.R.

Comments by Daniel B. Hurley, Consulting Geologist (retired) for the oversight hearing of the Subcommittee of Public Lands, Reserved Water and Resource Conservation of the Committee on Energy and Natural Resources of the U.S.Senate, held in Albuquerque, New Mexico, October 14, 1985.

Mr. Chairman, my name is Daniel B. Hurley, Consulting Geologist retired. Formerly I acted as field supervisor and consultant for Mobil Oil Corporation over a ten year period 1972 thru 1982 on the Chaco Slope of the San Juan Basin conducting uranium exploration projects. Associated with the project management was the responsibility for the protection of approximately four hundred (400) archaeological sites of which the most significant was the outlier Kin Ya-a, known as The Tall House and two Archaeological Protection Sites namely Muddy Water APS (Hurley Site) and Section 8 APS otherwise known as Fewkes Ruin B and Casa de Estrella. The recorded (400±) archaeological sites of the clearance field studies represent: only a few Archaic sites of the big game hunters, numerous Basket Maker III pit house sites but mostly Pueblo-Chacoan and historic Navajo sites. Collectively these are significant ruins and represent four periods of cultural development that exist as a relatively undisturbed repository, as important as a curated museum collection for future research and appreciation. And yet this whole composite represents only one percent of the forty one thousand (41,000) recorded sites of the San Juan Basin.

I am concerned with the preservation of this resource and will direct my comments to essentially two subjects; one, Surveillance and Patrol and two, Continuation of Research and Data Gathering Activities.

For the first, see Final Joint Management Plan (JMP) 1983 Section C, Emergency Protection Guidelines, pages 53 thru 55 and Patrol and Surveillance on page 54.

For the second, see Final Joint Management Plan (JMP) 1983 Section D, pages 56 thru 65 but particularly Public Law 96-550 Section 506b for Continuation of Research and Data Gathering Activities. See page 50 of the JMP.

Subject one: Surveillance and Patrol

During the period 1972 thru 1982 Mobil Oil Corporation's Crownpoint Operation offered opportunity to observe some of the problems related to archaeological site preservation. I would like to list a few conditions, actions and results.

To Kin Ya-a, which was under my surveillance as well as the Navajo Police, school teachers from the Thoreau District brought their family members on picnics during weekends and collected pottery shards. When intercepted and questioned, their response was that the area and access was not posted. They were correct. Archaeologists in general frowned on posting sites on the basis that such posting would attract rather than detract pot hunters. Since the land was mostly on Mobil's leases I secured consent of the Bureau of Indian Affairs (BIA) and the National Park Service (NPS) to place their notices against molestation on their respective areas at Kin Ya-a. Signs were built and notices posted by us on both the access and within the Kin Ya-a boundaries.

There were other incidents prior to the posting, like the minister who collected the attractive black on white shards to mail to his parishioners just prior to tithing. The Navajo Police responded to these violations when reported or observed. As a precaution Mobil kept some records on uninvited visitors on their leased properties.

The results of the posting were better than good. We had no further trouble or violations at Kin Ya-a. I hope it is the same today although I noticed on my last visit to Kin Ya-a that some of the signs were damaged or even down. The Agencies had not maintained them since Public Law 96-550 went into effect.

My recommendation is that posting be done on access to all APS sites. Even some of the Navajo Allottees might like to post their gates when they have ruins on their allotments. Since it is now a felony to molest sites, the Agencies have more convincing notices as a deterrent than the ones I posted. Since the Agencies have Rangers, Archaeologists and Police who periodically patrol the APS's and certain other ruins, it would be advantageous, with funding being limited, to have them do the posting as I did.

Mobil's leases at Crownpoint during the latter part of the ten year period consisted of seventy two (72) quarter sections within two townships. The quarter sections were Navajo Indian Allotments. The recorded archaeological sites were scattered within these leases. Most of the allotments were unfenced during the early 70's but the Allottees secured funding either from the allotment accounts or from loan sources. At any event, fencing became a reality and by the 80's almost all properties were both fenced and locked. This progressive fencing was very effective in cutting out trespass. I have heard that almost no pot hunting has been reported recently in the area. Unless there is a change in mores, the Navajos will not molest the sites on their properties. Their religeous training and their superstitions preclude disturbing the sites and structures of the "ancient ones".

My recommendation is that investigation be made into the source of funding to Navajo Allottees for fencing their properties. Fencing is an effective way of protecting the cultural resources in the Allotted Lands and at the same time provide security for grazing livestock which is the Navajo objective.

For those lands which do not come under either active patrolling or fencing there is a problem from vandalism and plundering. I'm not sure there is a solution but some ideas might be thought about. Tom Lyons, formerly of the Remote Sensing Division at the Chaco Center, now retired, convinced me as far back as 1980 that I could utilize remote sensing for determining the effectiveness of Mobil's reclamation effort on land surfaces disturbed by exploration activity. The photos showed the progression from growing season to growing season. Jointly we also did an investigation at Kin Ya-a to see if we could distinguish between types of disturbances. Our conclusion was that we could distinguish the old from the new and hence be able to identify ruins as opposed to recent disturbances. The clarity of photographs at Kin Ya-a was so good that the drill rigs and accessory vehicles could be identified on specific drill hole locations. I have little doubt that with the improvements made in the interim on remote sensing, that pot hunters and vandals at work could be spotted if surveillance were directed on the APS's, major outliers and other sizwable ruins.

A recommendation for the use of remote sensing in archaeological site surveillance is not in order unless the matter is resolved of where the expertise lies and where funding is coming from. What I am thinking about is unlikely partners to get together to see what can be done; even to see if it can be done. As an example, I can tell you a tale of cooperation during World War II of unlikely partners who solved a problem without undue cost and that resulted in mutual benefits.

In 1944 I was stationed near the front lines in Burma responsible for my share of meteorological forecasting and administrative work. The forecasting was for aircraft pilots who flew missions from the deck to 40,000 feet during the push that drove the Japanese out of Burma and Thailand.

One method of forecasting weather in the absence of regional meteorological map data was by single station analysis of data secured from a radiosonde instrument sent aloft on a balloon and tracked with a theodolite to procure directions and elevations in conjuction with the radiosonde meteorological data. During the monsoon there were so many decks of clouds periodically that hundreds of radio reporting stations in India and Burma reported their balloons lost in the overcast which left us barehanded.

Since I was aware that back in the USA targets were sent aloft with radiosonde equipment and tracked by radar, I thought that something similar might be appropriate for solving the problem. The Squadron did not have either the targets or the radar units.

My commanding officer gave his consent for me to see what could be "scrounged". For starters, an English Army ack-ack battery was less than a mile away and it had radar. The technicians also had to practice operating the unit every day. And making the targets was easy; a bamboo cross with copper wire stretched on it with a wave length of one half of the radars wave length was good enough. It was lighter than the U.S. targets and did not drag on the radiosonde balloon as it ascended.

The commanding officer of the ack-ack and radar units was very cooperative and even installed the telephone line from the radar unit to the weather station plotting table. Then we were in business. His men tracked our targets to 40,000 feet or more giving us control for our radiosonde data along with the very important winds aloft. We were able to use the single station analysis method to forecast weather over eastern Burma and greater Thailand and the radar crew became expert in tracking targets which was a boon for the occasions when the Japanese sent aircraft over to bomb the ships in the nearby harbor. It cost us all no more than the extra effort to do it.

Following the same theme but jumping ahead in time I refer you to Senator Pete V. Dominici's hearing statement of October 14, 1985 on page 2 which states that the Archaeological Protection Act of 1979, quote, "directed the Secretaries of Interior, Agriculture and Defense to set forth rules and regulations which foster increased cooperation and exchange of information between governmental authorities, professionals and private individuals". Underline emphasis mine.

My conclusion is that the Department of Defense which is expert and knowledgeable in the use of remote sensing of all types and for many purposes could be called in to train its new personnel in those techniques utilizing the major Archaeological sites of the San Juan Basin as targets. Since the Defence Department is already funded it does not add to the cost but merely constitutes a training exercise benefiting both the concerned public and responsible regulartory agencies of the government.

As a recapitulation, remote sensing, as refined as it has become, should be able to pinpoint vehicles and persons in and around the thirty three Archaeological Protection Sites and certain vulnerable chacoan outliers. When activities are noted, particularly for several days running, the Navajo Police, Government Agencies and Archaeological experts can be called in to investigate. It does not take long for a four wheel drive vehicle to close in for interrogation since roads are limited in the Basin. Should such trials prove successful the system could be expanded to cover more of the 41,000 recorded archaeological sites.

Subject two: Continuation of Research and Data Gathering Activities.

I am highly concerned about the decline in activities both in research and administrative compliance with the laws as enacted.. I do not intend to make a burdensome list of what has and has not been done but I would like to mention a few as examples.

Reference is made to the Final Joint Management Plan July, 1983 (JMP-1983). See pages 63 and 78. Subject: Remote Sensing.

Recently there has been the loss of Tom Lyons by retirement and Dr. Jim Judge by causal exile. The driving force of the Southwestern Cultural Resources Center is missing. Remote Sensing has dribbled to the memory of the words; certainly it is not an active tool as anticipated for the Site Management Plan Program. See pages 75 thru 78 (JMP-1983).

And lastly, there is the status of the Site Management Plans of the JMP. See page opposite page 38 in the last two right hand boxes of the flow chart.

Although there are at least thirty three Archaeological Sites that require Site Management Plans, I have heard of only two that have been completed. Those two were said to have been completed by the BLM.

I would hate to be responsible for developing an in situ leach project such as Mobil's South Trend (Section16) Wellfield which lies on the flank of the Muddy Water APS. There is a great deal of work entailed in the Historic Structures Report and the Archaeological Inventory let alone other requirements on the Muddy Water Complex. This plan has to be completed by the Bureau of Indian Affairs (BIA) first. Since the Site Plans were not part of the Final JMP at the hearings, they should be available to the public by the same process. Following new hearings on those plans the Secretary of Interior must approve the final versions. I would have to put the project on standby.

There will be controversy regarding activities in and adjacent to the Archaeological Protection Sites particularly in regard to prior rights and vested interests. The time frame for the Site Management Plans was short considering personnel requirements for the BIA for instance and for necessary funding. I would hazard a guess that, in spite of the BIA's increased archaeological staff, that routine clearances and tribal needs still constitute the major effort. The fact is that the plans are not available to either the public or to the Secretary of Interior. Perhaps more archaeologists of superior training and experience and more funding is necessary or a reconsideration of priorities, whichever is apropos.

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